LIFE-SKILL TRAINING PROGRAMME FOR ADOLESCENCE

PROJECT REPORT

(2016-2021)

Award Letter NO.: F.15-1/2015-16/PDFWM-2015-17-UTT-30859 (SA-II)

Date: 14-Mar-2016, 12-Oct-2015

Submitted to

University Grand Commission, New Delhi

By

DR. ALKA PANDEY

(Post Doctoral Fellow)

College of Home Science
GB Pant University of Agriculture and Technology
Pantnagar,
US, Nagar, Uttarakhand

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ALKA PANDEY

College Of Home Science,

G.B. Pant Univ. Of Agriculture & Technology

PANTNAGAR- 263 145 Distt. U.S. Nagar, (Uttarakhand), INDIA

Dr. Rita S. Raghuvanshi
Ph.D. Human Nutrition, FICN
Professor, Foods & Nutrition
Former Dean, College Of Home Science

DATE: - 06-2021

CERTIFICATE

This is to certify that the Project **"LIFE SKILL TRAINING PROGRAMME FOR ADOLESCENCE"** has been submitted to UGC under the PDFWM (Post Doctoral Fellowship for women) in Humanities and Social Science (Home Science, Human Development and Family Studies) by **Dr. Alka Pandey**, under my supervision and no part of this work has been submitted for any other degree or diploma.

The assistance and help received during the course of this investigation have been duly acknowledged.

Pantnagar
April, 2021

(Rita S. Raghuvanshi)

Telefax (off.): 05944-233637; E-mail: deanhsc1@gmail.com

CONTENTS

S. No.	Chapters	Page No.
1.	INTRODUCTION	1-5
2.	REVIEW OF LITERATURE	6-40
3.	MATERIALS AND METHODS	41-67
4.	RESULTS AND DISCUSSION	68-206
5.	SUMMARY AND CONCLUSIONS	206-215
6.	LITERATURE CITED	215-236
7.	APPENDICES	237-249

LIST OF TABLES

Table No.	Title of the Table	Page No.
3.1	Description of sample selection	45
3.2	Scoring of General and Reproductive Health-Knowledge Questionnaire (GRH-KQ)	51
3.3	Scoring of Personal, Environmental and Food Related Cleanliness Knowledge Questionnaire (PEF-CKQ)	51
3.4	Scoring of Girl's Personal Hygiene Knowledge Questionnaire (GPH-KQ)	52
3.5	Scoring of HIV Knowledge Questionnaire (HIV-KQ)	52
3.6	Scoring of Gender Imbalance Questionnaire (KGI-Q)	53
3.7	Scoring of Leadership Skill Questionnaire (LS-Q)	54
3.8	Reliability Index of scales	61
3.9	Distribution of sample for preliminary need assessment survey	62
3.10	Distribution of sample for the stage 2 (final) need assessment survey	63
3.11	Focal points covered in Life Skill Training Module	67
4.1	Frequency and Percentage distribution of demographic characteristics of population	69
4.2	Overall knowledge of respondents on various selected components of life skill education	71
4.3	Association between demographic variables and knowledge on nutrition and reproductive health	74
4.4	Association between demographic variables and Personal, environmental and food related cleanliness	81
4.5	Association between demographic variables and knowledge on Girls' personal Hygiene	86

4.5a	Association between demographic variables and experience during first menstruation	90
4.5b	Association between demographic variables and medium of information about menstruation	94
4.5c	Association between demographic variables and sanitary measures taken during menstruation	99
4.5d	Association between demographic variables and frequency of changing sanitary pads or cloth during menstruation the specialized categories	104
4.5e	Association between demographic variables and means of disposal of sanitary pads/cloth	107
4.6	Association between demographic variable and HIV knowledge	112
4.7a	Association between demographic variables and perception regarding occasion of drug consumption	118
4.7b	Association between demographic variables and perception regarding means of drug addiction	112
4.7c	Association between demographic profile and knowledge regarding government de-addiction centre	128
4.7d	Association between demographic variables and effect of telecommunication on drug use	131
	Association between demographic variables and cause of drug use	
4.7e	Association between demographic variables and knowledge about drug substances	135
4.7f	Association between demographic variables and knowledge about drug substances	139
4.7g	Association between demographic variables (Locale and Religion) and views on child marriage	143
4.8a	Association between demographic variables (Age and Gender) and views on child marriage	150
4.8b	Association between demographic variables (Family Income and Type of Family) and views on child marriage	158
4.8c		
4.8d	Association between parental occupation and views on child marriage	162
	Association between Parental education and views on child marriage	

4.8e	Association between demographic variables and Gender Imbalance	167
4.9	Association between views on career counselling and Demographic variables (Locale and Religion) of the respondents	173
4.10a		181
4.10b	Association between demographic variables (Age and Gender) and views on career counseling	187
4.10c	Association between demographic variables (Age and Gender) and views on career counseling	
4.10d		190
4.10e	Association between demographic variables (Age and Gender) and views on career counseling	
4.11	Association between parental education and views on career counselling	192
	Association between demographic variable and Leadership Skills	194
		198
		201

LIST OF FIGURES

Figure No.	Title	Page No.
3.1	Map of Udham Singh Nagar (Uttarakhand)	43

LIST OF FLOW CHARTS

Sl.No.	Title	Page No.
3.1	Sample Selection Procedure	44
3.2	Steps of Establishing Reliability and Validity of Research Instrument	57

LIST OF ANNEXURES

Sl. No.	Title	Page No.
I	Need Assessment Scale of Life Skill Education for Adolescents (NASLSEA)	237-249
II	PUBLISHED RESEARCH PAPERS	
	Pandey A., and Raghuvanshi R.S. 2021. Addressing knowledge gaps in adolescent nutrition and reproductive health: toward advancing life skill education and sustainable development. Accepted for Journal of Community Mobilization and Sustainable Development.	250-260
	Pandey A., and Raghuvanshi R.S. 2021. Life skill education: an assessment of personal, environmental and food related hygiene and cleanliness knowledge of adolescents of Udham Singh Nagar. Accepted for Journal of Community Mobilization and Sustainable Development.	261-272
	Pandey A., and Raghuvanshi R.S. 2018. An Assessment of Knowledge, Attitude and Menstrual Hygiene practices among adolescent girls of Kiccha Block, Udham Singh Nagar; Published in International Journal of Applied Home Science, Vol. 5, Issue 3, pp 639-647	273-280
	Pandey A., and Raghuvanshi R.S. 2017. Steps in establishing Reliability and Validity of Need Assessment Questionnaire on Life Skill Training for Adolescents; published in International Journal of Applied Home Science, Vol. 4, Issue 9&10. September & October 2017, pp 846-850.	280-285
III	PUBLISHED POPULAR ARTICLES	
	Pandey A., and Raghuvanshi R.S., Importance of Life Skill Education In Schools, Rashtriya Krishi, Vol.12, No.1, June 2017, pp- 115-116	286-887
	Pandey A., Counselling se Kishro ke aashao ko lag sakte hai par, Uttranchal Deep Udhamsingh nagar, 17 Dec. 2016, pp 8.	288
	Pandey A., Kishoro ke liye aavashak hai counselling, Rashtriya Sahara Gopalganj, 5 September 2016, pp 9.	288

IV	PUBLISHED MODULE Pandey A., and Raghuvanshi R.S., "A Training Module on basic life skills", ISBN 9788195212477, Ocean publications, Year-2021, No. of pages 224.	289-291
V	PAPER PRESENTED AND ABSTRACT PUBLISHED IN SEMINAR/CONFERENCES	

Chapter I

INTRODUCTION

An adolescent holds vast amount of liveliness, positive energy and resources for their country, and wish to be revered upon, appreciated and accepted accordingly. They need this unlimited energy, vitality and idealism, for fulfilling a robust urge to experiment and explore in order to make a better world. The world is currently having one among the biggest reservoirs of youth population i.e. 1.8 billion out of the full population compared to past decades (UNFPA, 2014). There are seventeen developing countries within the world whose half the population age is a smaller than eighteen years. Republic of India is home to quite 243 million people aged between 10-19 years that accounts for 2 hundredth of the entire population of the country. The recent researches indicated that the life skills competencies within the young aren't capable enough to address the challenges of twenty first century (Deffenbacher et al., 2008 & Rao, 2011). With respect to the education system of today, one has to change a child in order to deal effectively with the atmosphere, makes most use of resources, make out accessible opportunities, become self dependent and face the challenges of society. To change this activity, a child needs to go through multiple transformations within. To assess that the system has to enrich the varsity course of study with effective life skills coaching programme. Which refers to accumulation of life talents on the far side its definition is to learn accommodate knowledge of usual living and crucial principles so as to constructively outline essence of survival to suit the criteria of actual life and state affairs to overcome daily life problems.

Goody (2001) says that it is not enough to ask how life skills are defined in general; rather it is essential to ask how they are defined in particular life situations and throughout life. Quane (2002), says that , life skills are developed as a result of a constructive processing of information, impressions, encounters and experiences- both individual and social that are part of one's life and work, and the rapid changes that occur in the course of one's life. During such situations, life skills education and training paves the approach for distinguishing the capability through self- analysis, assessing the need and training within the various field for an improved and effective result. Life skills can facilitate the individual to translate information, attitude and values into healthy behaviour. Hence life skills is that ability which will be imbibed and improved through learning to translate the information, attitude, and values

into positive behaviour, to deal with efficiency with the wants and challenges of day to day life (NairR.V.2010).

Life Skills-based education is outlined as primarily being a behaviour amendment or behaviour development approach designed to handle a balance of 3 areas - knowledge, attitude and skills (UNICEF, 2002). World Health Organization (1996a) has classified a core set of life skills into the subsequent 3 components: a. Thinking skills: constitutes consciousness, social awareness, goal setting, drawback finding, and decision-making. To be able to think critically, information ought to be provided so as to create fair alternatives and assess correct decisions. The skills to think critically can also be developed in teenagers by giving them a chance to vision different views and abundance and also consecrating ofpros and cons and making them understand the negative consequences of creating hasty, unplanned choices. b. Social skills: includes appreciating or substantiating others, operating with others and understanding their roles, building positive relationships with friends and family, listening and communicate effectively, and taking responsibility and handling stress. Social skills change the adolescents to be accepted within the society and to simply accept social norms, which offer a foundation for adult social behaviour. c. Coping/Negotiation skills-suggests that not solely negotiating with others however with oneself yet. For effectively negotiating with others, one ought to recognize what one desires in life, is firm on one's values and beliefs and may thus say "no" to harmful behaviour and risky temptations and effectively brick ways that facilitate one to balance with one's own emotions and stress effectively. According to the interior policy paper by the Ministry of Youth, New Zealand a young person's positive skills ought to embody the following: Authority, ability to address challenges, facilitate seeking behaviour, productive work habits, need to find out, involvement in sports, corroborative cluster of friends, healthy behaviour or life style, involvement with cultural teams, smart social skills, sound identity, and hobbies, skills, interests (Adolescence Education write up, 2001). There's an extended proof suggesting children's psychology includes that social and emotional skills is negatively affected after the youngsters become old in underprivileged learning contexts (Shonkoff and Phillips, 2000; Schady et al., 2014). Moreover, recent proof suggests that the strain related to growing up in poorness negatively affects children's brain development and brain functioning in adulthood (Angstadt et al., 2013). Life skills programmes, therefore, have vital scope to reinforce social,

emotional and thinking skills among college kids. It will facilitate to navigate their difficult environments resulting in higher educational performance and social mobility.

1.1. RATIONALE OF STUDY:

Adolescence is a period of intellectual, physical, social and emotional thresholds, but regrettably, most of the adolescents are incapable of utilizing their potential to maximal which maybe due to various reasons. Either say the mmultiple emerging issues such as global warming, famines, poverty, suicide, population explosion or the societal ills like alcoholism, drug abuse, sexual abuse, smoking, juvenile delinquency, anti-social acts, etc. have an adversely impacted the development of the adolescences to a large extent. Moreover the barbarous competition amongst the individuals in the field of unemployment, job security, life status etc. are some of the major concerns.Such kind of different obstacles requires a different yet immediate responses from a amenable system of education. 'Education' is proven to be important but what kind of education is needed is the major concern. And it's realized over the time that education to support and live life better is far more important. It often seen that life skills education helps in conjoining the gap between basic functioning and capabilities. It helps in strengthening the ability of an individual to reach the required needs and demands of the present society and helps in dealing with the above issues in a manner to get desired behavioural practice.Through cconveyance of such skills in efficient manner by guidance and training help them to inculcate it in real life.

Some other rational motives behind the inclusion of life skill education in curriculum are striking alterations in global economies over the past five years. These alterations have been compatible with the transformations in technology and all of these are hugely impacting the education system, the workplace and home life. To overcome with the accelerating it and change of modern being, students need to acquire life skills to deal with stress and frustration. Today's students will have numerous new jobs over the passage of their lives, with associated pressure level and the need for adaptability. Life skill training will help adolescents to face challenges in managing emotions, developing an identity, resisting peer pressure, building relationships, communicating and negotiating safer life situations, making decisions for education and career.

1.1.1. Importance of life skill education for students:

In everyday life, the development of life skills helps students to:

- Find new ways of thinking and problem solving
- Recognise the impact of their actions and teaches them to take responsibility for what they do rather than blame others
- Build confidence both in spoken skills and for group collaboration and cooperation
- Analyse options, make decisions and understand why they make certain choices outside the classroom
- Develop a greater sense of self-awareness and appreciation for others

1.1.2. Importance of life skill education for society:

The more life skills are developed individually, the more these affect and benefit the world in which we live:

- Recognizing cultural awareness and citizenship makes international cooperation easier
- Respecting diversity allows creativity and imagination to flourish developing a more tolerant society
- Developing negotiation skills, the ability to network and empathize can help to build resolutions rather than resentments

It is believed that education is not really just an exchange of knowledge but that it is essentially a preparation for life. Focus of education should not be limited to youth, we must make a concerted effort to educate as many teachers as we can on life skill issues so that traditional mindsets are broken and the teachers bring to the youth not just accumulated years of study but a vision of society where men and women are equally important and make informed and responsible choices regarding their health and life. This project is prepared in believing a bottom-up approach, which would enrich the soil in which the plant grows.

Present study intends to bring to light the role of life skills in fostering study skills among school going adolescents. The findings of this research may help educationists, policy makers, and

planners to introduce life skills in academic curricula to enhance the competency of students to contribute to the knowledge society.

1.2. OBJECTIVES OF THE INVESTIGATION

1.2.1. General Objective-

To facilitate the life skills Training Programme for the Adolescents of Udham Singh Nagar.

1.2.2. Specific Objective-

1. To coach adolescent to be conscious, conscientious and confident citizens.

    i. By raising their awareness of relevant social issues such as- gender imbalance, early marriage and drug addiction.

    ii. By enhancing understanding of general health, hygiene, HIV/AIDS and reproductive health.

2. To develop leadership skills in adolescents through developing negotiation and conflict resolution skills.
3. Provide career counseling to adolescent which will help to go further in their education.
4. Provide extensive training and ongoing support and technical assistance for facilitators/implementers (teachers, youth, parents etc.) so they can provide life skill training for youths.

Chapter II

REVIEW OF LITERATURE

In the new era of human existence, education is undergoing a significant transformation every other aspect of it have been radically impacted due to multiple phenomenon like changes in science & technology, globalization, privatization, urbanization, industrialization, etc. but the major prey to such scenarios is our youth. The youth is facing multiple emerging complications such as global warming, famines, poverty, suicide, population explosion as well as social, emotional, physical and psychological issues. And the cut-throat competition, unemployment, lack of job security, etc. have even worsened the situation and as a result, they all are caught in the mad race. Nobody is left with time for his/her 'self', to explore learn or to develop empathy with surrounding and for creating harmony in the society. Since decades, the young minds are being considered as the most productive members of the society, due to their physical and intellectual capabilities. But when it comes to a real life challenge, most of them are unable to utilize their potential in an appropriate way due to lack of guidance and motivation. On addition social problems like alcoholism, drug abuse, sexual abuse, smoking, juvenile delinquency, anti-social acts, etc. are serving as the stumbling blocks in the path of their success.Such new challenges requires immediate and an effective response from a socially responsible system of education.

Hence, now a day's Education is very important. But the major concern is to have a kind of education which is most suitable to support and live life better. Therefore, the cardinal focus of Education needs an extraordinary emphasis on developing survival supporting skills in students, as they are the important building blocks for a dynamic citizen, who can cope up with future challenges, and survive. Central Board of Secondary Education (CBSE) India has recognized the fact that it is necessary to have a grip on both scholastic as well as co-scholastic areas, and hence, has made life skill education as an obligatory constituent in its course and curriculum. It has been often felt, that life skills education omits the disparities between the basic functioning and capabilities and strengthening the ability of an individual to meet the needs and demands of the present society. Thus, a relevant life skill education helps in dealing with the above issues in a manner to get desired behavioural practices.

This chapter endeavours to present a review of the various research findings important in the context of the present study. Before touching up any specific research work in the development of a subject or a topic, the previous theories, studies and researches must be thoroughly known to the researcher. To ensure this acquaintance, every behavioural science research project has to review the available theoretical and research literature. Review of literature serves a variety of background functions preparatory to the actual collection of the data. In these research approaches the literature is reviewed to create the context from the past to enable the study to be conducted with new subjects and recently gathered data.

For explore any field of knowledge extensive use of library, related of literature and references are necessary. Though it is a time consuming affair but it proves to be very helpful to the investigator in providing adequate knowledge of the sources of his areas and makes him aware of what has already been discovered relating to his field. It is not something done in vain or for increasing the bulkiness of any research report, rather it is important because this accumulated and recorded knowledge of past and constantly add to the vast score of knowledge and makes possible progress in all areas of human endeavour. The present chapter is an attempt to the review the literature related to the topic. With this view, an attempt has been made in the following part of this study to review the available literature to the area of the proposed research. An earnest effort has been made to review the available literature and presented under the following sub headings:

2.1. INTRODUCTION TO LIFE-SKILL EDUCATION

2.2. MEANING AND CONCEPT OF LIFE SKILL EDUCATION

2.3. GOAL OF LIFE SKILL EDUCATION

2.4. COMPONENTS OF LIFE SKILLS

2.5. DIFFERENT MODELS OF LIFE SKILLS PROGRAMS

2.6. THEORETICAL PERSPECTIVES

2.6.1. Child and adolescent development theory

2.6.1.1. Implications (Effects) of life skills

2.6.2. Social learning theory

2.6.3. Social influence theory

2.6.4. Cognitive problem solving theory

2.6.5. Problem behaviour theory

2.6.6. Constructivist psychology theory

2.6.7. Multiple intelligence theory

2.7. RELATIONSHIP OF LIFE SKILLS, STUDY SKILLS AND ACADEMIC PERFORMANCE

2.8. IMPORTANCE OF PROVIDING LIFE SKILL EDUCATIONS TO INDIVIDUALS

2.8.1. Importance of life skill education for Students, parents and teachers

2.8.2. Importance of life skill education to deal with HIV/AIDS

2.8.3. Importance of providing sexual and reproductive health information through life skill education

2.8.4. Importance of Life Skills Training for Holistic Development

2.8.5. Life skill education for empowering youths in challenging situation

2.9. IMPACT OF LIFE SKILL EDUCATION ON VARIOUS ASPECTS OF INDIVIDUAL'S LIFE

2.9.1. Impact of life skills education on the knowledge level of adolescents

2.9.2. Impact of life skill education on Self-esteem, Adjustment and Empathy among Adolescents

2.9.3. Impact of life skill education in development of self concept and confidence in individuals

2.9.4. Impact of Life Skills Intervention Training on Emotional Intelligence

2.9.5. Impact of life skill education on stress and its coping style

2.9.6. Impact of Life Skills training on the Behavioural Aspects of Children in need for care and protection

2.9.7. Impact of life skill program on the use of multiple substances

2.9.8. Role of life skill training in building Self - Concept

2.9.9. Role of leadership quality and leadership competencies on individual's leadership potential

2.10. LIMITATIONS IN IMPLEMENTING LIFE SKILL EDUCATION

2.11.1. INTERRELATIONSHIP OF VARIOUS COMPONENTS OF LIFE SKILL EDUCATION

2.11.2. Interrelationship of life skill education and Value education:

2.12. Training / Intervention programme on life skill for leading successful life:

2.13. LIFE SKILL EDUCATION AND TEACHERS

2.13.2. Awareness of teachers on life skill education

2.13.3. Attitude of teachers towards life Skill Education

2.13.4. Importance of life skill training for teachers

2.13.5. Impact of life skill education on teacher's performance

2.14. LIFE SKILL AWARENESS IN STUDENTS

2.15. LIFE SKILL EDUCATION AND CURRICULUM

2.15.1. Introducing life skill education in academic curriculum

2.15.2. Importance of introducing life skill education in school curriculum

2.15.3. Need of incorporate multiple literacy curriculums in Indian school

2.15.4. Need of vocational education in secondary school curriculum

2.16. CONCLUSION

2.1. INTRODUCTION TO LIFE-SKILL EDUCATION

Adolescence is a time of vivacity, positive vitality and development of assets for the nation, and should be regarded and acknowledged accordingly. They have boundless energy, essentialness and optimism, just as a compelling impulse to explore and make a superior world. World ought to be pleased with having perhaps the biggest repository of youth which is 1.8 billion out of the entire populace (UNFPA, 2014). There are seventeen developing nations on the planet whose half of the populace age is under 18 years. Amongst which India is resides more than 243 million people aged between 10-19 years which represents 20% of the all out populace of the nation. The ongoing studies and researches directed that the fundamental abilities and

capabilities which youths are possessing aren't sufficient to address the difficulties of 21st century (Deffenbacher, Lynch, Crede and Kuncel, 2008; Rao, 2011).The training, today, needs to empower the youth to efficiently understand the environment and able to utilize its assets, perceive accessible chances and face the difficulties of society. To empower these social changes in the individuals, the fundamental framework of the schools educational plan need to be improved.

Numerous researches have demonstrated that Adolescents who are deprived of social connections, intellectual abilities becomes progressively helpless and turns towards drug addiction, harassment, brutalities, STIs, HIV, AIDS, lack of healthy sustenance and other financial and natural difficulties. Explicit emotional, psychological and conduct and strength abilities have an indispensable influence in guaranteeing an individual's personal and social achievement (Langford and Badeau, 2015; McWhirter, McWhirter, McWhirter, and McWhirter, 2007; WHO, 1993). Similarly psychosocial abilities permit people to perceive, connect, impact and identify with others in various situations. Individuals with psychosocial abilities have constructive psychological well-being and prosperity (Savoji and Ganji, 2013; WHO, 1993). Extra aptitudes, for example, enthusiastic, intellectual, conduct and flexibility improvement in teenagers will assist them with exploring their mental push backs for high hazard conduct and negative mental prosperity (WHO, 2016). Fundamental abilities have been recognized as a basic asset for creating psychosocial, cognitive, social and adaptive aptitudes to haggle with each day challenges and profitable contribution in the network (Desai, 2010; Galagali, 2011). These aptitudes are known to be key supporters of arranging and intervening difficulties that youngsters face in turning out to be beneficial aspect (Prajapati, Sharma, and Sharma, 2017; Savoji and Ganji, 2013; WHO, 1993).

2.2. MEANING AND CONCEPT OF LIFE SKILL EDUCATION

The significance and idea of life skill is past its definition. It is anything but difficult to characterize the idea all in all however to suit the clarification in the whole specific life circumstance and all through life is troublesome. Goody (2001) says that it isn't sufficient to ask how life skills are characterized largely; rather it is crucial to ask how they are characterized specifically life skills throughout the life. Quane (2002) says that, life skills are created because of a productive handling of data, impressions, experiences and encounters both individual and

social that are a piece of one's life and work, and the quick changes that happen over the entire life span. In such circumstances, education and training for life skill development paves a path for recognizing the limit through self-examination, evaluating the prerequisite and preparing in the particular zone for a superior and successful outcome. Life skills will assist the person with translating information, disposition and qualities into solid conduct. Such is understanding of reality is the capacity that can be soaked up and improved through training, to interpret the information, mentality, and qualities in to positive conduct, to manage the necessities and difficulties of everyday life (Nair R.V.2010).

2.3. GOAL OF LIFE SKILL EDUCATION

The goal of life skills education is to furnish people with suitable information on risk taking practices and create aptitudes, for example, correspondence, decisiveness, mindfulness, dynamic, critical thinking, basic and innovative speculation to shield them from misuse and abuse (UNICEF, 2015; WHO, 1993). Life skill programs are led with an emphasis on explicit fundamental abilities, contingent upon the setting. For instance, in nations like the United States, United Kingdom, Germany, Greece, and Mexico exceptional life skill training programs are intended to advance positive refusal aptitudes and powerful dynamic around smoking, liquor, drug abuse, HIV, AIDS, contraception, discernment about sexual exercises and condom use (Botvin, Griffin, Diaz, and Ifill-Williams, 2001; Campbell-Heider, Tuttle, and Knapp, 2009; Givaudan, Leenen, Van De Vijver, Poortinga, and Pick, 2008; MacKillop, Ryabchenko, and Lisman, 2006; Martin, Nelson, and Lynch, 2013; Menrath et al., 2012). Conversely, creating nations, for example, India, Sri Lanka, Maldives, Bangladesh, Thailand, Mynamar and Nepal fuse fundamental abilities ideas into their educational plan at various evaluation levels (WHO, 2001). These life skill programs are structured and directed in successive request by part, with an accentuation on ordinary leanings, for say daily life adaptively, which is an essential expertise. Use of understandings identified with wellbeing and social issues, for example, gender roles are considered as transitional level abilities. Further, the propelled level utilization of life skills, example, those comparable to risk taking practices (for example medications and smoking) are presented last (WHO, 1993). In like manner, nations in the Asia and Pacific Regions, for example, join fundamental abilities into thorough Sexuality Education (CSE) projects to decrease risk conducts and improve the wellbeing and prosperity of youngsters (UNFPA, 2015). Thusly, fundamental abilities adopts on a contemporary strategy to show wellbeing and other social

issues (WHO, 2001), which are conveyed in different ways. For example, Life Skills Education (LSE) as proposed by the World Health association is an instructive intercession that is intended to address life skill center regions with necessities and result based participatory learning (UNICEF, 2003, 2015). The principle objective of LSE is to create positive and versatile conduct by supporting people to rehearse and develop psychosocial aptitudes that can decrease risks and benefit from useful conduct (Munsi, Guha, Bengal, and Bengal, 2014; Prajina, 2014). The life skill training approach forms on how youngsters gain from their own encounters and from the individuals around them (WHO, 1993). Drawing on Bandura's social learning theory, abilities are found out through communication, handling and organizing of encounters (Aparna and Raakhee, 2011; Prajapati et al., 2017). Thusly, life skill is intended to be educated through experiential learning, for example, pretend, displaying and practice. Life skill Based Education (LSBE) is a methodology used to deliver explicit substance to accomplish a specific objective (UNICEF, 2003). For instance, life skills based HIV/AIDS training means to bestow information about HIV and AIDS through all encompassing learning encounters planned for creating information and mentalities as well as the aptitudes required for a person to settle on educated choices for constructive conduct change (UNICEF, 2012). LSBE is conversely utilized with ability based wellbeing training and is regularly used to address a wide scope of themes huge to youngsters, teenagers, youth and grown-up improvement. The fundamental contrast among LSE and LSBE is the methodology. In LSBE, training strategies and exercises are utilized to assist students with building up the important psychosocial aptitudes to secure information and build up the correct mentality for positive conduct change. Also, LSBE improves the worth and significance of customary subjects, for example, proficiency and numeracy alongside social issues, for example, HIV/AIDS, sex, harmony and condition, uniformity and supportable turn of events. LSBE centers on the improvement of basic reasoning, explanatory reasoning and arrangement aptitudes in overseeing data, information and encounters in different everyday issues (UNESCO, 2008). One of the later ways to deal with instructing fundamental abilities is through imbuement. Imbuement incorporates preventive destinations and exercises into scholastic exercises so that the substance and aptitudes that the students get are spread across various educators (Smith et al., 2004). The key target of the implantation approach is to show students how to decipher data and ideas they learn in school into their day by day life. Accordingly, life skill substances are implanted into the essential subjects of the school educational plan with a creative conveyance strategy (Smith et al., 2004). Not at all like the LSE

where substance is conveyed in number of meetings, the fundamental abilities mixture approach doesn't confine the substance into number of meetings yet rather guarantees that all parts are dispersed across subjects through enhancement in conveyance techniques. Infusion approach has been demonstrated to be viable in diminishing smoking, hard-core boozing, and utilization of pot (Botvin and Kantor, 2000; Smith et al., 2004; Vicary et al., 2004) and accordingly 145 nations have incorporated fundamental abilities into their essential and auxiliary educational programs (UNICEF, 2012). In any case, for an imbuement way to deal with be successful it should be planned well and conveyed age fittingly (Konkel, 2016). Further, the mixture way to deal with instructing life skills is constrained to the school setting as discoveries can't yet be summed up to different settings (Bwayo, 2014; Konkel, 2016).

2.4. COMPONENTS OF LIFE SKILLS

Life skill based training can be characterized as essentially being to conduct change or improvement approach intended to address a parity of three territories - knowledge, attitude and skills (UNICEF, 2002).WHO (1996a) has arranged a center arrangement of fundamental abilities into the accompanying three parts: a. Thinking skills: includes self-awareness, social awareness, goal setting, objective setting, critical thinking, and dynamic. To have the option to think critically, data ought to be given so as to settle on educated choices and decisions. The ability to think fundamentally can likewise be created if the youngsters are allowed the chance to take a gander at alternate points of view of an issue, the prod and the cons of settling on one choice over the other and causing them to understand the negative results of making rushed, spontaneous choices. b. Social abilities: incorporate acknowledging or approving others, working with others and understanding their jobs, building positive associations with loved ones, tuning in and conveying adequately, and assuming liability and adapting to pressure. Social aptitudes empower the teenagers to be acknowledged in the general public and to acknowledge normal practices, which give an establishment to grown-up social conduct. c. Coping/Negotiation abilities imply haggling with others as well as with one self too. For adequately haggling with others, one have to recognize what individual requires in his/her life, either rigid towards his own value system on one’s qualities and convictions and can consequently say "no" to hurtful conduct and dangerous allurements. Viable adapting methodologies that help one to offset with one’s own feelings and stress adequately. As per the internal policy paper by the Ministry of Youth,

New Zealand a youthful person's constructive aptitudes ought to incorporate the accompanying: Self-certainty, capacity to adapt to difficulties, help looking for conduct, beneficial work propensities, want to learn, association in sports, steady gathering of companions, solid conduct or way of life, inclusion with social gatherings, great social abilities, sound character, and leisure activities, aptitudes, premiums (Adolescence Education Newsletter, 2001). There is impressive proof proposing children's intellectual, social and passionate abilities can be adversely influenced when they experience childhood in impeded learning settings (Shonkoff and Phillips, 2000; Schady et al., 2014). Besides, ongoing proof recommends that the pressure related with experiencing childhood in neediness adversely influences children's mental health and cerebrum working in adulthood (Angstadt et al., 2013). Life skill programs, in this manner, have huge extension to upgrade social, enthusiastic and thinking aptitudes among younger students. It can assist with exploring their difficult surroundings prompting better scholastic execution and social versatility.

2.5. DIFFERENT MODELS OF LIFE SKILLS PROGRAMS

Instances of life skill programs have been actualized by means of different central regions, for example, sports settings, harmful practices, and sexual and conceptive well being (Jones and Lavallee, 2009). In any case, all life skill programs expect to fill a similar need, which is to assist people with conquering difficulties and develop into sound individuals. For instance, the Positive Adolescents Life Skills (PALS) program depends on a psychological conduct aptitude building intercession that embarks to change conduct by improving social abilities (Tuttle, Campbell-Heider, and David, 2006). The program comprises of 25 cognitive behavioral skill building meetings that are separated into five units contained problem solving skills, cognitive skills, assertiveness and basic communication (Campbell-Heider et al., 2009). The PALS program has been seen as viable with youngsters in their regular daily existences (Campbell-Heider et al., 2009; Tuttle et al., 2006). IPSY (Information + Psychosocial Competence = Protection) is a widespread school-based life skills program that means to defer the beginning and decrease utilization of liquor and tobacco during adolescences (Weichold, 2014; Wenzel et al., 2009). IPSY is a mix of intra-and relational life skills, and substance decrease aptitudes, for example, opposition abilities, school holding, information and avoidance of substance misuse (Weichold, 2014). Further, IPSY is viewed as a powerful intercession

against the utilization of tobacco and medications among young people (Giannotta and Weichold, 2016; Weichold and Blumenthal, 2016; Weichold et al., 2016; Wenzel et al., 2009).

Fit and Strong for life, created by Ahrens-Eipper et al. in 2002, is an entrenched particular life skills program led for essential and optional schools in Germany (Cina et al., 2011). Lions Quest, created by Wilms and Wilms in 2004, plans to encourage life skills and self-adequacy and incorporate the avoidance of substance misuse, for example, cigarettes, liquor, and medication utilization as their essential goal (Menrath et al., 2012). Fit and Strong for Life covers themes, for example, interchanges abilities, adapting to pressure and feelings, confidence, compassion, opposition aptitudes, dynamic, basic reasoning abilities, and wellbeing training (Cina et al., 2011). This program is focused to essential and auxiliary younger students while Lions Quest is conveyed to optional school understudies with subjects, for example, confidence, self-viability, adapting to feelings, dynamic, and entomb and intra connections. The two projects have been seen as powerful in lessening tobacco use however no impacts have been found on the advancement of wellbeing related practices, social abilities, self-viability or in general conduct improvement (Cina et al., 2011; Eisen, Zellman, and Murray, 2003; Menrath et al., 2012). Fundamental abilities Training (LST), created by Botvin, centers around youthful substance misuse practices. The principle point of the program is to give options in contrast to unsafe practices instead of simply giving data about liquor, medications and smoking. Botvin's Life Skills Training program is intended to show young people the essential abilities expected to oppose peer impacts on the utilization of smoking, drinking and utilizing drugs. Through ability building exercises, youths create confidence and self-assurance to successfully adapt to pressure and nervousness (Botvin, Dusenbury, Baker, James-Ortiz, and Kerner, 1990; Botvin and Griffin, 2004; Epstein, Griffin, and Botvin, 2000; Griffin and Botvin, 2014; Griffin, Botvin, Scheier, Epstein, and Doyle, 2002). Thorough Sexuality Education (CSE) plans to diminish hazardous conduct and improve wellbeing and prosperity of youngsters (UNFPA, 2015). The substance of the CSE program incorporate conceptive wellbeing and pubescence with chances to create uplifting perspectives, qualities and assemble fundamental abilities, for example, bury and intrapersonal correspondence, dynamic, and emphatic aptitudes (UNFPA, 2015; UNICEF, 2010).

2.6. THEORETICAL PERSPECTIVES

A theoretical perspective is a logical system of general concepts that underlies the organization and understanding of observations. It helps to explain how people change and grow over time, as well as how to account for continuity. It offers a language of constructs and hypotheses that guide systematic inquiry and compare observations in order to build a body of knowledge.

A theory is also a particular set of principles, assumptions, or explanations designed to make sense of observations of the world. It also can be defined as a set of perspectives and a world view, which means different cultures often embrace different theories. A theory in the social sciences is not a "proven fact," such as a theory in chemistry or zoology. A behaviour theory, for example, is an explanatory model of the cause or consequence of a behavioural attitude or behavior. A theory can be used to predict a response under a particular condition, which could be tested with research if desired.

Theoretical analysis forms an important part of this study, as it builds a theoretical foundation upon which the current research is based, by reviewing the relevant literature, relating them and thus fixing the research issue. Also it enables the researcher to be acquainted with the current knowledge of the field in which the research is being carried out. The researcher attempts to define as well as explain the significant concepts and variables with the help of available theoretical schemes and research studies. This section analyses seven theories: child and adolescent development, social learning, problem behaviour, social influence, cognitive problem solving, constructivist psychology theory, and multiple intelligences.

2.6.1. Child and adolescent development theory

Piaget (1972) was the one who gave out the notion of child and adolescence development through his researches, and later Vygotsky (1978) took the concept for further development. These two researchers paved the understructure for the theory in and helped in further apprehending the behavioural matrix behind the concept as well as other developmental aspects widely.

Learning to pragmatically assess one's abilities and self is another crucial process during childhood (Newman and Newman, 1998). Piaget often had the opinion that by adolescence a person is able to conceive perceptions on many aspects, leading towards the formation of a system of laws or rules for problem solving (Piaget, 1972). An adolescent's beliefs and worries about appearance can oftentimes lead to a detrimental dieting and premature indulgence into sexual intercourse before achieving a level of cognitive or emotional maturity (Eccles, 1999). Another facet of the developing self-concept is self-efficacy. Self-efficacy can be referred to as

the “level to which individuals perceive themselves as being worthy, as causally important people, and as efficient in shaping the events and outcomes in their lives” (Tyler, 1991). Social interactions become progressively convoluted as the child move into adolescence. Now the peers consume much more time of their day and interactions with opposite-sex peers’ increases. During these critical years, either a child learns to be proficient and productive or starts to develop an inferiority complex, which can lead to long-lasting and critical social, intellectual and emotional resultants (Hansen et al. 1998; Csikszentmihalyi and Schneider, 2000). Moral development is an important facet of human development. It can be defined as the “development of one's values and rules, for balancing or arbitration of the conflict of interests of their self or others.” (Westen, 1996). Kohlberg delineated the development into stage which moves from a child’s fixation with the consequence driven behaviour towards behaviour on the grounds of moral judgments that incorporate the rights of others, and proceeding inculcate the universal principles of ethics (Newman and Newman, 1988; Kohlberg, 1976).

2.6.1.1. Implications (Effects) of life skills

- In a school set up, late childhood and early adolescence (ages 6–15) are crucial times of opportunities for building skills and constructive lifestyle. During this time span, children are forming the perception and ability to think abstractly, to understand working and result concepts, to vibe with their peers in unique ways, and to solve problems as they experience more liberty from parents and develop greater command over their own lives.
- In a broader social context, early and middle adolescence dispense numerous scenarios in which one practices new skills and develops positive habits with peers and other individuals outside the family.
- Developing attitudes, values, skills, and proficiency is identified as censorious to the formation of a child's self concept as an independent individual and to the entire learning process in school.
- Within this age, the skills of a young child of the same age and different ages can vary dramatically. Activities need to be monitored and should be developmentally suitable (Mangrulkar et al., 2001).

2.6.2. Social learning theory

The theory is also known as the Cognitive-Social Learning Model, is mostly based on the work of Albert Bandura (Bandura, 1977b). His researches caused him to conceptualize that children learn to behave through both instruction (i.e., how parents, teachers, and other authorities and role models tell them to behave) as well as observation (i.e., how they see adults and peers behaving) Such behaviours can be reinforced, or molded, by the reactions of their actions and the further responses of others to their behaviour. Children learn to act by observing and socially interacting, rather than just listening to verbal instructions. Bandura also emphasized impact of self-efficacy (confidence in one's abilities to perform appropriate behaviour) in their learning especially under the borders of social pressure to behave accordingly. Thus, skills development not only becomes a question of outward behaviour, but of internal qualities (such as self-efficacy) that help those types of behaviour (Bandura, 1977a). Social learning theory had two profound impacts on the development of life skills and social skills programmes. One was the need of assessing the child with methods or skills for overcoming with internal elements of their social lives, including stress reduction, self-control, and decision-making. Many life and social skills programmes address these skills. Another was to effectively replicate their life and social skills programmes in the natural settings.

In line with the social learning theory, these skill teachings are required to resonate with the natural processes by which children adapt behaviour: modelling, observation, and social interaction. It further accomplishes that reinforcement is necessary in learning and moulding behaviour. Positive reinforcement is applied for the correct demonstration of behaviours and skills; negative or corrective reinforcement is applied for behaviours or skills that need to be adjusted to build more positive actions.

2.6.3. Social influence theory

Social influence outlooks are based upon the work of Bandura as well as the psychological inoculation theory developed by researchers, including McGuire (1964, 1968). Social influence approaches identifies that a child and adolescent will come under pressure if gets indulged in risky behaviours, such as tobacco use. Social pressures include "peer pressure, models of smoking parents, and smoking-related messages in the mass media that feature

attractive smokers" (Evans, 1998). This theory was stimulated by the research which demonstrated that such programmes merely provide information on the consequences of risky behaviours (such as smoking), and/or uses fear to prevent children from getting indulged in these behaviours were unsuccessful. Researches in these programmes came out with the results that "Fear induced learning had long-term dangers of smoking and appeared to be insufficient to curb its onset among many young adolescents, when exposed to social pressure to indulge in this behaviour". This outlook was first used by Evans (1976) in smoking prevention programmes.

By acquiring this approach of social learning theory, peer and social pressures can be very much controlled to effect engagement in such negative behaviours, thus pointing toward early prevention rather than later intervention. Teaching children resistance skills is more efficient for decreasing the degree of problematic behaviours than just providing information or provoking fear of the results of the behaviour (WHO, 2004).

2.6.4. Cognitive problem solving theory

This competence-building model proposed by Shure and Spivack (1980) theorized that teaching Interpersonal Cognitive Problem Solving (ICPS) skills to children at a young age can reduce and prevent negative, inhibited and impulsive behaviours. Researchers have found that different levels of interpersonal thinking skills in children display different social behaviours. The defining skills concentrate on one's ability to generate alternative solutions to an interpersonal problem and adding on the ability to apprehend the resultants of non suitable behaviour. The relationship between these problem solving skills and social adjustment was found to be there not only in preschools and kindergarten years, but also in adolescents and adult years. An intervention based on this research, the ICPS intervention (also called "I Can Problem Solve"), conceives interpersonal cognitive problem solving skills initiated in preschool, with the final goal of prevention of later and more serious problems by addressing the behavioural predictors early in life. This strategy of teaching interpersonal problem-solving skills at early stages in the developmental process (childhood, early adolescence) develops a strong foundation for later learning. Further, emphasizing on skills for self-awareness and self-management, as in anger management or impulse control, as well as generating alternative perspective views to interpersonal problems, can lessen or prevent such problematic behaviours.

2.6.5. Problem behaviour theory

Developed by Richard Jessor, this theory identifies that it's not possible to reduce adolescent behaviour (including risk behaviour) to a single source; it is the result of composite interactions between people and their environment. Problem behaviour theory resonates with the relationships among three categories of psychosocial variables: (1) the personality system; (2) the perceived environmental system; and (3) the behavioural system. The personality system constitutes "values, expectations, beliefs, attitudes, and orientations toward self and society." The perceived environmental system is related to the perceptions of friends and parents" attitudes toward behaviour. And, similar to Bandura, the behavioural system generally described as a particular set of socially non accepted behaviour (the use of alcohol, tobacco, and other drugs, sexual behaviour by persons below a certain age, delinquency, etc.). Developing skills such as values clarification (to better understand one's own values and beliefs) and critical thinking (to clearly identify and evaluate the values of the social environment) impacting on the behaviour, and can be even more efficient in coordinating with the programmes that affects other variables, such as poverty reduction programmes, clinical health services or school dropout prevention. The inferences of this approach are far more effective in moulding the attitudes of the children. In line with this theory activities are swayed around by an individual's values, beliefs, and attitudes and by the perceptions of friends and family about these types of behaviour. Hence, such skills in critical thinking (the ability to evaluate oneself and the values of the social environment), effective communication, and negotiation are crucial aspects of skills-based education and life skills. Building these types of interactions into activities, with opportunities to practice the skills, is an important part of the learning process (WHO, 2003)

2.6.6. Constructivist psychology theory

The summary of constructivist psychology is that an individual's development includes higher mental functioning, which is rooted in social sources. A child's cognitive development is perceived to be a synergetic process, developed through interactions with other people and with the environment. Thus, making an individual not the centre of knowledge-making, but his or her learning is dependent on social interaction (Mangrulkar et al., 2001).Educators and psychologists, Piaget (1972) and Vygotsky (1978), probed that a basic phenomenon for child

development is the cognitive conflict that is formed through social interaction; a discrepancy between a child's existing understanding and a child's experiences with others, particularly peers slightly older or more learned, leading him or her to question existing value system and heed for new levels of understanding. Arguments given by Vygotsky, is focused on that "Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and with his peers" (Vygotsky, 1978, p. 80). Segregating the individual from his or her social influences is seen to be quite impossible, and learning itself is perceived as culturally and contextually peculiar.

A crucial element in Vygotsky's theories is the notion of the Zone of Proximal Development (ZPD). He questions the relationship between developments and learning, we have to differentiate between two individual developmental levels: the actual level of development and the potential level. The actual is described as the problem solving that a child can do alone, compared to the potential development which occurs when the child solves a problem under adult guidance or with more knowledgeable peers. From the perspective of constructivist psychology, the learning environment reflects an outstanding role in helping a child's development and will be, in turn, influenced by the collective learning and peer interactions which took place.

The emphasis of constructivist theory was on the proficiency development in youngsters. The constructivist approach underlines the necessity of the cultural context in imbibing any life skills curriculum with meaning; the adolescents themselves co-create the constituents through the interaction of the factual information with their particular cultural environment. This perspective identifies that the development of skills through the interaction of the individual with the social environment can affect both the learners and the environment (peer group, classroom, youth group, etc.) (WHO, 2003).

2.6.7. Multiple intelligence theory

Gardner (1993) threw some light on the "Frames of Mind ", questioning the prevailing perception of human intelligence as an associate degree of uncomplicated set of psychological features and symbol-using capacities, acknowledging primarily solely verbal/ linguistic and mathematical/ logical skills. Gardner steered the existence of eight human intelligences that take into consideration the wide selection of human thinking capacities. These embody linguistic,

logical/ mathematical, musical, spatial, bodily/ kinesthetic, naturalist, social and intrapersonal intelligences. This theory postulates that everyone's personalities are a unit born with the eight intelligences, however they're developed to a unique degree in every individual which contributes in developing skills or resolving issues, people use their intelligences in several ways

The theory of multiple intelligences has necessary implications for instructional systems, and for integration of life skills approach to promotion and prevention. Identifying alternative intelligences, on the far side the standard verbal and mathematical skills, needs that lecturers which ought to teach this broader variety of skills. Secondly, a range of schoolroom instruction strategies are a unit required to have interaction with the various learning varieties of the scholars. This means the employment of democratic, active learning strategies that stimulate the employment of musical, spatial, naturalist and alternative intelligences, and permits kids and youngsters to have totally different intelligences at the same time (Mangrulkar et al., 2001).

Other researchers have elaborated the thinking on the two "personal" intelligences: social intelligence, the power to grasp and distinguish the sentiments and intentions of others, and intrapersonal intelligence, the power to grasp one's own feelings and motivations. Goleman (1997) popularized this idea in his book, Emotional Intelligence that argues that knowing a way to manage one's emotions is a minimum of as necessary for fulfillment in life as intelligence. This idea has served as the basis of a number of the works in social and emotional learning (Weissberg et al., 1998; Hawkins et al., 1992).

Each of those theories provides a bit of the inspiration for justifying skills development and also the differing views on why these skills are necessary. Some focus a lot on activity outcomes, justifying skills development as the way to maneuver the adolescents towards the behaviour that organic process expectations, cultural context and social norms realize is acceptable. Others focus a lot on the acquisition of skills because of the goal itself, since ability in problem-solving, social communication, and partitioning conflicts may be seen as crucial components of healthy human development. Finally, some theoretical views read life skills as the way for adolescents to actively participate in their own method of development and also the method of constructing social norms. By teaching youngsters a way to assume instead of what to assume, by providing them with the tools for resolution issues, creating choices and managing emotions, and by partaking them through participative methodologies, skills development will become a method of management.

2.7. RELATIONSHIP OF LIFE SKILLS, STUDY SKILLS AND ACADEMIC PERFORMANCE

"Learning is not development; however, properly organized learning results in mental development and sets in motion a variety of developmental processes that would be impossible apart from learning" (Vygotsky, 1978).

As indicated by Usha Rao (2016), training is a character-building process; and the focal object is to set up a person to be mentally, inwardly, truly, socially and profoundly skilled and having all the possibilities to address the difficulties and perils of life unhesitatingly just as more effectively. Understudies experience a transitional stage from puberty to adulthood. Over the scholarly long periods of their youth, they make a decent attempt to adjust to the school condition and conquer difficulties. Understudies additionally need to be sincerely autonomous and take on new social qualities and obligations (Misera and Castillo, 2004). Understudies who are encountering trouble in focusing on the scholarly work might not have the powerful adapting abilities important to make up for the weight and uneasiness that they feel when being tested. Life skills are those capabilities that help individuals in working admirably in the situations in which they live. Life skills, from this point of view, are basically those capacities which help to advance mental prosperity and fitness in youngsters as they face the real problems of life. Also, it empowers youngsters to learn and rehearse abilities, since fundamental abilities training depends on an individual's focus and action arranged approach. Lastly, life skills education depends on the way of thinking that youngsters ought to be engaged to assume greater liability for their activities (WHO, 1993-1996). Fundamental abilities incorporate individual and social aptitudes, which young people ought to find out about and at last have the option to treat themselves and the others in a suitable way adequately and securely (McTavish, 2000).

Numerous analysts accept that assertiveness, relational aptitudes, communication skills, objective setting, dynamic, critical thinking and perceiving individual qualities are among the contributing variables that assist understudies with advancing their emotional wellness, build up their subjective abilities, scholastic accomplishments and forestall conduct issue (Crismore, 1984; Misera and Castillo, 2004; Zhao and Kuh, 2004; Fallahchai, (2011). Absence of such abilities, be that as it may, would cause understudies to pull off upsetting difficulties through inadequate and maladaptive practices (Taromiyan et al., 1999).

As per Usha Rao (2016), Life abilities help one to supplement scholarly insight and subjective limits with a human comprehension of issues. Placing into powerful practice the information picked up is the genuine key to adequacy in any field. It is in this setting fundamental abilities assume a significant job. Fundamental abilities give a solid down to earth structure to construct, create and deal with any condition one is gone up against with; these incorporate one's capacity to listen well, handle struggle obviously, convey adequately, acknowledge duty enthusiastically, oversee time understandingly, work with others sympathetically, acknowledge analysis strongly, work pleasantly significantly under tension and show great habits. All such made statements imply that instruction is intended to plan understudies for life by methods for equipping to the developing needs of the general public.

2.8. IMPORTANCE OF PROVIDING LIFE SKILL EDUCATIONS TO INDIVIDUALS

2.8.1. Importance of life skill education for Students, parents and teachers

For investigating likes and dislikes of parents, students and teachers regarding importance of life skill education in school curriculum Mahesh, O (2003) conducted a study and found that graduate teachers gave preference to Communication skills, Confidence skill, and Success skill for exams, Family skills, Sensation skill, Problem-Solving skill, hard work skill, Creative thinking skill. Professional teachers (B.Ed.) gave preference to Confidence skill, Family skill, hard work skill, Conflict fighting skill. On the other hand M.Ed. students preferred Healthy livelihood, Communication skill, Understanding skill, etc. Students also preferred Self-Awareness, Confidence skill, Confidence skill, Self-Learning skill, Adjustment skill, etc. Finally parents preferred expression skill, implementation skill, vocational skill and time management skill. Findings of the study reveal the importance of Life Skills for students, parents and teachers at various levels.

In another study parents considered life skill education was very effective in life skill development, particularly in the areas of social skills, learning to learn, and personal development (self-confidence, self-care, and self-direction). Parents also identified health and diversity as important areas. The skills to be developed through the secondary school curriculum will solve crisis in different walks of life (Theresa M. Ferrari, Carrei A. Houge (2010).

2.8.2. Importance of life skill education to deal with HIV/AIDS

Many times modern Indian youth exposed to unsafe sex and vulnerable to HIV/AIDS. To deal with this issue awareness programme was planned and the plays were staged by secondary schools students, college students and community members. Fifty thousand persons have been covered in one hundred shows in one year focusing on behavioural changes, Negotiation skills and parents attitude on such matters. Forum theatre technique has been used where audience active participation was also allowed. The paper recommends that sexual activity is not the only area for youth other options can be used for creative satisfaction. There are other ways to get engaged in creative work, sports, etc. The play can be integrated in the School Adolescence Life Skills Education Program (SALSEP) curriculum. This will educate, inform, and protect the children in this vulnerable age and will empower them in reproductive health at the right time (Naik, M. 2006).

To evaluate the extent of awareness, knowledge, beliefs and current attitudes of adolescent students towards HIV/ AIDS, Gaash Basir (2003) conducted study on total 2,250 girl students of class XI and XII. Students were randomly selected from different government higher secondary schools of Srinagar district. The information was gathered through a pre-structured questionnaire. The study reveals high HIV awareness among urban, educated adolescents, than much worse level of awareness among the rural, illiterate counterparts. The matter is serious and requires intensive HIV/AIDS awareness campaigns in all high and higher secondary schools of the state. The study also reflects parental attitudes and possible dangerous misguidance from the friends, leading to misconceptions for adolescents. No scientific knowledge was found among the adolescents. The situation is highly alarming, due to widespread ignorance among adolescents about the 'risk groups'.

Knowledge on HIV/AIDS is not only essential for students but also for their teachers as they impart the information to their students. So, the study on perception about HIV/AIDS among teachers was undertaken by Saravanan in 2012. The study was conducted on the 300 teachers working in the schools by using normative survey method. Findings revealed that the level of perception about HIV/AIDS among teachers is high. There was significant difference between the mean HIV/AIDS perception scores with regards to male and female teachers, UG/PG teachers, educated and uneducated parents of the teachers, rural/urban school teachers and govt. /private school teachers. So it is essential to promote HIV/AIDS knowledge among

teachers, which in turn helps to provide knowledge among students. There is significant need for teachers to receive formal training in HIV/AIDS education.

2.8.3. Importance of providing sexual and reproductive health information through life skill education

In Indian education system sex-related issues are often prohibited subjects this lack of information and awareness concerning the sexual health increases vulnerability to poor sexual health among the adolescents, which includes their physiology, social norms and gender imbalances. Shib Sekhar Datta, Nilratan Majumder (2012) observed in their study that psychosexual development and the physical changes in students lack formal channels of the communication. When these changes take place in them they cannot relate and communicate comfortably with others. The researcher recommends that sex education in schools should include medical staff, teachers and peers to provide sexual and reproductive health awareness to teenagers. They also found that Indian studies demands strong willingness of adolescents, towards the implementation of sex education in schools.

Introduction of life skill education in school curriculum will also reduce reproductive and sexual health problem and impart sex education in students Sex education influences the need, perception and the knowledge of the students. Sunil Thomas Jacob (2009) stated in his study that life skill education will help in reducing reproductive and sexual health problems, reduce teenage pregnancy, reduce number of maternal deaths, reduce incidence of STIs and proportion of HIV positive in 10-19 years age group. The main objectives of his study were to produce outcomes of integrating the Life Skills education as a separate subject in the curriculum of the 11th class. The major area of intervention was the Adolescent Reproductive health/Career and Training of the Teachers for imparting the Life Skills Education. For this the final modules for the Life skills education subject was pilot tested and the text books was launched by the Department of Education and the Board of Secondary Education of Rajasthan in 2005. In India Rajasthan became the first state to incorporate the life skills education in the curriculum as a separate subject of 11th Standard by 2006. This study delineates the process of the successful incorporation of the Life skills education in the curriculum of the 11th class. Another study depicts positive attitudinal change after training in life skill education in schools. It also removed the myths and Increased awareness among the students. Study also suggested that these intervention programs should be developed with the involvement of students and school

teachers, with a little initial orientation and some resource material (Thakor, Hitendra G. and Pradeep Kumar (2000).

2.8.4. Importance of Life Skills Training for Holistic Development

The main objective of life skill education is to enable students to develop a concept of oneself as a worthy and contributing member of the society and also focus on not only acquiring knowledge, but improve "social skills, emotional balance, time management skills, financial literacy, health consciousness, and problem-solving skills among others to ensure a person's holistic development, character building for this value-based teaching is essential aspect". Moral aspects like values, respect to others, kindness, cultural and cuisines tolerance, truthfulness and courage need to be inculcated. If these skills are taught at early stage, it becomes easier for the child to assimilate them.

It is very important to teach right set of skills to children to deal with responsibility and accountability. This will enable child to learn to use freedom in right amount and will be empowered to deal with every life situations. Research suggested that teaching fraternity must be trained to appreciate and measure academic work, give quantitative marks and at best, write qualitative report. Unless mindset of the teachers undergoes a sea change, life skills teaching like many other concepts will remain a white paper presentation (Manjula Pooja Shroff 2012).

Various components of life skills such as: critical thinking, problem solving, decision making, interpersonal relationships, and stress and anxiety management, effective communications are interrelated. According to Seth (2002) decision making skills includes creative thinking and critical thinking. Further the study reveals that the bases of sound interpersonal relation skill are empathy and good communication. Language also plays an important role in learning stress management, reducing tension and developing healthy interpersonal relations. Study emphasis on learning important life skills which help in the holistic development of children and its significance cannot be ignored.

2.8.5. Life skill education for empowering youths in challenging situation

Youth and adolescent are more prone to numbers of problems including HIV/AIDS, sexual transmitted infections, and use of drugs, violence attitude and sexual coercion it is thus important to equip the adolescent with necessary life skills to deal effectively with challenges of

life. It is thus need of the time that educational programs with appropriate learning environment are necessary for the development of life skills using the 'Life Skill Based Education' (LSBE). Margret Francis (2007) stated that various skills like leadership, responsibility, communication, intellectual capacity, self esteem, Interpersonal skill etc. extends its maximum level, if it is practicing effectively among the youth. Researcher further insists on creating life skill education programs compulsory for youth, for this an effective and influential implementation strategy will be required to help the youth to internalize it in their life. Special skills like leadership, communication, self-understanding, decisions-making, working with groups, interaction and socialization enhance to the quality of life of youth.

Social anxiety causes individuals to fear situations. In such situations shy people feel anxious while interacting with others, and start escaping to avoid any social situation. Present study reveals that shy people avoid social situations to avoid feeling of anxiousness and panic. By doing this, they will not have to worry about what they say, what others are thinking of them. There is significant difference in life skills of boys and girls of student-teacher. Girls possess more life skills than boys. There is no significant difference in academic anxiety of boys and girls of student-teacher. However, girls have more academic anxiety than boys. There is significant relationship between life skills and academic anxiety of student-teacher. The results clearly reveal that more the life skills, lesser is the academic anxiety (Asmitaben, Chandrakantbhai Patel, 2012). In another study it was found that there was no significant difference in Academic Anxiety of boys and girls and of govt. and private school students. Also there was no significant difference in Life Skills of boys and girls; but there was significant difference in Life Skills of private and govt. secondary school students. It was found that students from private schools had better Life Skills than students of govt. school students. The study also revealed significant highly negative relationship between Life Skills and Academic Anxiety (Geeta Garg, 2011).

2.9. IMPACT OF LIFE SKILL EDUCATION ON VARIOUS ASPECTS OF INDIVIDUAL'S LIFE

2.9.1. Impact of life skills education on the knowledge level of adolescents

The main aim of Life Skills Education is to provide deeper understanding of the life skills especially in the case of adolescents. Present study was carried out to analyze the

knowledge of life skills among adolescents and the impact of life skills education training on their knowledge level. The study is carried out in the coastal area school in the taluk of Karunagapally, Kerala, India to. The study has revealed significant impact of Life Skills Education training on adolescents. This opens up arena to conduct more research in this field with modifications and contextualization of training modules. Contextualization needs to cater the needs of the target group especially when it comes to the backward sections of the community (Pujjar,L.L., 2014) .

2.9.2. Impact of life skill education on Self-esteem, Adjustment and Empathy among Adolescents

To know the impact of life skill education on Self-esteem, Adjustment and Empathy among Adolescents, Pooja Yadav and Naved Iqbal (2009) conducted a study on 60 students Self esteem inventory (school form), Adjustment inventory for school students (AISS) and the Empathy quotient (EQ) were administered in a group session before training was given and after training. In the post condition, of training the result showed that subjects improved significantly in post condition on self-esteem, emotional adjustment, educational adjustment, total adjustment and empathy. However, no significant difference was found on social adjustment in pre and post condition, thus reflecting that Life skill education and training do show positive results in bringing change in adolescent's attitude, thought and behaviour by providing supportive environment to them.

2.9.3. Impact of life skill education in development of self concept and confidence in individuals

Sandhya Khera (2012) has conducted a study on "A Study Of Core Life Skills Of Adolescents In Relation To Their Self Concept Developed Through Yuva School Life Skill Programme". Objectives of the study were to study the relationship between Core affective life skills and Self-Concept of adolescents developed through YUVA School Life Skills Programme and to study the relationship between Core cognitive life skills and Self Concept of adolescents developed through YUVA School Life Skills Programme. The study investigated the relationship between self concept and core life skills of randomly selected 500 adolescents studying in secondary classes of sarvodaya schools situated in south Delhi under gone for YUVA (SLP). The Major findings of the study that there is a positive co-relation between Core Affective Life Skill and

Self Concept of adolescents which means those who posses these essential skills are better confidence in all aspects.

2.9.4. Impact of Life Skills Intervention Training on Emotional Intelligence

Tarun Deep Kaur (2011) has conducted study on, Impact of Life Skills Intervention Training on Emotional Intelligence of College Adolescents and to examine the effects of an intervention program on the emotional intelligence of college adolescents. Generalized Self Efficacy Scale, Sevenfold Emotional Intelligence Scale and Cooper Smith Self Esteem Inventory were used for pre and post test. The students who were low on test norms were selected for the EQ development program for three months. The results were analyzed using paired sample t test to examine pre post test mean difference which revealed a significant increase in the scores of EQ.

2.9.5. Impact of life skill education on stress and its coping style

To study stress among adolescents and its coping styles Dubat K, Punia S, Goyal R (2007) conducted study on two schools (one CBSE and one State Board Education), 80 students of 12th standard and 20 each from both the affiliated schools selected randomly, from both the affiliated schools of the 2 selected cities i.e. Hyderabad and Hisar. A Life Stress Scale, general role stress scale and coping questionnaire were used as tools. Results showed that majority of the adolescents had moderate or low level in coping, distancing; escape avoidance, painful problem solving and positive appraisal. Hisar adolescents used escape avoidance and accepting responsibility as a coping strategy to a higher level. Adolescents from Hyderabad frequently used positive methods of coping and were more independent in their decisions due to the cultural differences and educational status of the parents. Another study shows that the intervention on life skill education was helpful for the rural adolescent girls to take positive actions and improving their coping skills of stress and problem solving ability (Pujjar,L.L. 2014).

2.9.6. Impact of Life Skills training on the Behavioural Aspects of Children in need for care and protection

Jessy John Sir, (2009) studied the significant levels of changes that a life skills development program brings out in the behavior of juveniles in juvenile homes and emphasized on skills development. The study focuses on providing care and protection and help in improving unconstructive behaviors and actions that come under the supervision of juvenile justice system

and found that life skills help in inculcating positive behavior and moulding them into individuals with high emotional and behavioral intelligence.

2.9.7. Impact of life skill program on the use of multiple substances

Consumption and use of Alcohol, tobacco, and other drugs is a serious problem during adolescence. The Life Skills Training program can be work as an effective primary prevention program for adolescent drug abuse. Over two decades of evaluation research are reviewed and results were drawn from a series of small scale studies and large scale effectiveness trials on adolescent populations and reflected the positive behavioral influences of life skill program on smoking, alcohol, use of multiple substances, drugs like marijuana with preventions until the end of high school (Botvin, G. J & Griffin K.W.,2004). In another study LST is designed to change students' perception norms related to use of alcohol, tobacco and other substances and found the long-term effects of Life Skills Training on reducing substance use among students in schools (Rob Lillis 2011).

Zollinger, T.W., Commings, S.F., & Caine V. (2003) evaluated the impact of the Life Skills Training Curriculum on middle school student's knowledge, attitude, and ability to make good lifestyle decisions. From 1997 to 2000, students in level six to eight in the study schools received the Life Skills Training curriculum. Survey data were used to compare those not exposed to the program and showed tobacco use behaviour and attitudes. 12.5% of the students surveyed, were currently smoking. Students completing the Life Skills Teaching Curriculum were more knowledgeable about the health effects of smoking. Program effects were different for male and female students as well as for White and Black students.

2.9.8. Role of life skill training in building Self - Concept

For investigating the relationship between self concept and core life skills 500 adolescents studying in secondary classes of Sarvodaya schools of south Delhi were selected randomly. Self Concept tool developed by Dr Pratibha Deo and Self-made test of Core life skill were used. Study found positive co-relation between Core Affective Life Skill and Self Concept of adolescents which means those who posses these essential skills are better confidence in all aspects (Sandhya Khera, Shivani Khosla, 2012).

2.9.9. Role of leadership quality and leadership competencies on individual's leadership potential

There has been limited research on how leadership potential is influenced by leadership quality. To explore the rating of teachers on attributes of leadership (qualities and competencies) of the principals of reputed private schools in India, questionnaire titled 'Leadership attributes of my principal' was used to collect data. This instrument comprises of eight dimensions of leadership qualities which are communication skills, comfort, empathy, decision making, influence, time management, self-management and commitment, and five dimensions of leadership competencies, instructional leadership, organizational leadership, community leadership and ethical and moral leadership. The findings indicated that principals were rated to be excellent in leadership qualities and competencies by their teachers. Furthermore all the eight dimensions of leadership qualities are proved to be significant determinant for leadership competencies, preference of humanistic skills over technical skills for school effectiveness (Sailesh Sharma 2015).

2.10. LIMITATIONS IN IMPLEMENTING LIFE SKILL EDUCATION

In spite of knowing importance of life skill education in school curriculum, its inclusion is not so easy. Boniface Francis Kalanda, (2010), found in his study that major challenges in implanting LSE in schools are inadequate teaching and learning resources such as books, lack of knowledge of LS/SRH by teachers, inadequate time for teaching LS/SRH and critical shortage of staff. Another study revealed that teachers are not adequately prepared to implement LSE as they found problems like inadequate teaching and learning resources and inadequate guidance on the implementation. The study suggested organizing in service courses to guide teachers, LSE books and other reference materials should be provided to teachers and teachers were advised to prepare professional documents like lesson plans and teaching aids for effective teaching (Kimbui Susan King'ori, 2011).

2.11.1. INTERRELATIONSHIP OF VARIOUS COMPONENTS OF LIFE SKILL EDUCATION

Interrelationship of various components of life skill education had been proven in many studies. Seth (2002) in his study found that various components of life skills such as: critical thinking, problem solving, decision making, interpersonal relationships, and stress and anxiety

management, effective communications are interrelated. According to the study decision making skills includes creative thinking and critical thinking. Further the study reveals that the bases of sound interpersonal relation skill are empathy and good communication. Language also plays an important role in learning stress management, reducing tension and developing healthy interpersonal relations. Study emphasis on learning important life skills which help in the holistic development of children and its significance cannot be ignored.

2.11.2. Interrelationship of life skill education and Value education:

Shiela Ramakrishnan (2010) study outlines the efforts of the educational system towards the black and white of life skill education and children to learn life skills in schools, as a part of the curriculum. Mostly value education and life skills are considered synonymous but the term has several interpretations. Shiela Ramakrishnan linked Value education to the hardware of a person, while life skills are the software and the fundamental value teaches how to cope with life. Therefore life skills could be used as coping skills, and these methods that we use to cope, are based on the kind of values we believe in.

2.12. Training / Intervention programme on life skill for leading successful life:

Life skills are very important in each stage of life to cope with the various situations. Schools should integrate life skills into their academic activities and teachers should be trained on this. With the Objectives of assessing the needs of academic backward children, imparting the appropriate life skills and testing the efficacy of the intervention programme; present study was planned. AB Single Subject Design was carried out and the data was analyzed using non-parametric tests. Need Assessment analysis show that the children had lack of self-awareness, Creative Thinking and Critical Thinking Skills. Based on the findings, the researcher used life skills activities suggested by WHO and implemented using group work approach. Results show that out of 15 children 13 children's parents are either illiterates or educated up to 10th standard only and have very poor parental supervision. Wilcoxon Signed Ranks test shows that there is a significant difference between baseline and post intervention in the domains of Self Awareness ($p<0.05$), Creative Thinking ($p<0.001$) and Critical Thinking Skills ($p<0.01$). It was also observed that parental supervision and academic performance had been increased significantly. There is a need to identify children who have lack of skills in rural areas and teach them in order to make them compete with their urban counterparts (Gayatri et. al, 2017).

Many studies proved that Life skills are necessary for successful life. Life Skills for Vocational Success is designed to address the needs of people with varying strengths and weaknesses. This program indicates the need of the highest percentage of people who have difficulty in developing appropriate life skills. According to the researcher people with mental disabilities (retardation, mental illness, and learning disability), a substance abuse history, or life experiences will be benefited from the training of these skills. This training program effectively train people who wants to make adaptations, utilize recommended supplemental resources, or incorporate a lesson into an already existing training program (Doug Couch, 2009).

For developing an Entrepreneurial Life Skills in Summer School, the emphasis had been placed upon educationalists to introduce more elements of enterprise into the school curriculum at all levels, and new and innovative ways to initiate the subject matter is increasingly being searched. It was stress on the difference between Traditional and Enterprise modes of learning and contests that compared with traditional methods of teaching and learning; life skills enterprise education requires a different pedagogical approach and aims to qualitatively change the educational experience. It was suggested that traditional teaching is better suited to the needs of the "old" economy whereas the enterprising approach being more conductive to the needs of the new flexible market economy Jones, Brian, Iredale (2006).

2.13. LIFE SKILL EDUCATION AND TEACHERS

2.13.2. Awareness of teachers on life skill education

Life skills are very important competency everyone should have. It can be imported to the students through teachers only. So it is the need of the hour for the teachers to get familiar with Life skills. J.Jayachithra, 2020 study reveals that most of the teachers still have poor awareness on Life skills. So it is important for teacher education courses to have Life skills in the curriculum. So that it can be imported to the students effectively. Sharma S. (2003) conducted a study with the objective of developing a scale to measure life skills and concluded that most of the teachers were not aware of the concept of life skills.

2.13.3. Attitude of teachers towards life Skill Education

To investigate the attitude of senior secondary teachers about the life skills educations in term of sex and area Present study was planned. For this purpose 22 senior secondary schools

were purposively selected from Jaipur city, Rajasthan. Study revealed that the attitudes of urban sr. sec. teachers are higher than that of rural teacher towards different dimension of life skill education. Critical thinking skill is one of the life skill about that the male and female both teachers show almost same attitude. In term of area it was found that attitude of urban senior secondary teachers is higher than that of rural teachers towards coping with emotion, interpersonal relations, communication, coping with stress, empathy, problem solving, decision making, creative thinking and critical thinking. Self awareness is one of the life skill about that the urban and rural both teachers show almost same attitude. Whereas another study on Attitude of Teachers towards In-services Training Programmes of Life Skill Education found no significant difference between 61 Rural and Urban, Male and Female and Teaching Experience (1-10 and11-20+) teachers attitude towards in-service training programs of Life Skill Education (Prashant Thote, 2015)

2.13.4. Importance of life skill training for teachers

Life skill training is not only important for students but it is similarly important for their teachers. Study suggested that integrated life skill will get through only if there is teacher training and support with these concepts being incorporated in school curriculum and in textbooks. To impart life skill education, both formal and informal education needs to be combined. Teachers should be trained in basic education, well proven methodologies for teaching general life skills and professional active learning approaches. The study concludes that efforts should be made to make life skill more central to curriculum planning and discourse (Usha Ajithkumar 2009).

So many researches has been proved that not only students but there teachers also get benefited from life skill training. Teachers can achieve good mental health with the help of life skill training programme To know the Effect of Life Skills Training on the Mental Health and Level of Resilience among Teachers of Normal Students and Teachers of Exceptional Students in Zahedan, Hossein Jenaabadi (2015) conducted study and result showed the positive effect of life skills training on mental health of teachers, the lower their mental health scores would be and on resilience of teachers, the higher their resilience scores would be. Whereas in one study it was found that74 percent of teachers had not been in-serviced on life skills curriculum. The study recommended giving of in-service training to teachers through workshops, seminars, the head teachers should be ready to provide enough learning and teaching resources for the successful implementation of the life skills curriculum (Ndemba, 2014). Most of the researcher suggested that adoption of life skill education in academics is very important and to

implement properly in academics teachers should be trained in the life skills education. Sharma (2003) based on his study recommended that training of teacher in the life skill education context and policy of compulsory primary education.

2.13.5. Impact of life skill education on teacher's performance

Various studies show that value and life skills based training resulted in positive impact on teachers. For example life skills training organized by UNICEFF India in 2006 in collaboration with the education department of the Gujrat government had improved the performance of teachers and students both. Another study to support the influence of life skills training was conducted by Shechtman, Levy; Egozi and Leichtentritt (2001) in Israel. Results indicated that teachers with 2 years of training had significantly higher scores on work environment and self-efficacy measures than did teachers with less training. Studies related to life skills showed its importance in improvement of the performance of people which motivated the researcher to take life skill as her area of study. Researcher tried to investigate important aspects of teachers' performance and, in the light of researches, the researcher found work environment and teachers' self efficacy as important aspects responsible for performance of the teachers. On the basis of the study of Malakolunth; Idris, Rengasamy (2010) and Pyhalto; Janne; Salmela-Aro (2011) etc., it was observed by the researcher that work environment is one of the major area which highly affect the performance of a teacher. Importance of teachers' self efficacy, was proved by the studies of Navidini, Shirazizade (2009) and Guo and others (2012) etc.

Rawat, Indu Bala in 2014 found that Life skills training have been effective in improving the performance of the trainees. Life skills training had positive impact on the trainees and it improved their perceived work environment. The areas which were improved by the training are physical environment, work load/pressure, commitment, gender issues, managerial/administrative issues, job satisfaction/clarity, professional development, interpersonal relationship. Hence Teachers' Perceived work environment can be improved by life skills training. Present study further reviles that given life skills training was beneficial for improving the self efficacy of trainees in the areas of student engagement, instructional practices, classroom management, creating a positive school climate and enlisting parental/community

2.14. LIFE SKILL AWARENESS IN STUDENTS

For measuring life skills of secondary school adolescents of Kathmandu, Sharma S. (2003) conducted a study with the objective of developing a scale to measure life skills and to assess the levels of life skills in adolescents. She concluded that "Maternal education was

significantly associated with higher life skill levels in adolescents. Connectedness and family support were other important factors influencing the level of life skills in the adolescents". The paper further insists on life skill education to young people and will also help in their mental and physical development.

2.15. LIFE SKILL EDUCATION AND CURRICULUM

2.15.1. Introducing life skill education in academic curriculum

The students are generally identified by the school and society, as a child with 'attention deficit hyperactivity disorder' and are poor problem solvers and decision makers. Life skill education should be in terms of ability to assess a problem situation and find solutions, capacity for convergent and divergent thinking, effective interpersonal skills, and ability to communicate effectively. A lot of thought is required on bringing in life skills education into the mainstream curriculum. Schools and various agencies should work on development of conceptual and practical framework of life skills which should be made to work from pre-primary, extending to primary, middle and the secondary stage. Subitha G. V. (2011) study recommends school curriculum to include lectures based on situational case studies and role plays to improve behaviour and experience of the students. Joints efforts of educationists, psychologists, mental health professionals and policy makers would be required to form effective life skills training programme. The training programme would need to transcend across all development stages of the child and should have an inbuilt monitoring and evaluation system.

An appropriate curriculum pattern for life skill includes purposes, syllabus, type of content, instructional methods, and evaluation methods of life skills. A study indicated that teaching of self-awareness skill to students is effective in advancement of this skill. The result also indicates that self-awareness, effective communication, interpersonal relationship, coping with stress, decision-making, problem solving, critical thinking, and creative thinking are important priorities for all groups and teaching these skills based on the provided model for life skill curriculum is effective in strengthening this skill among the high school students (Kord-Noghabi and Hassan Pasha Sharifi, 2008).

Inadequacies of all the academic subjects applicable to real life situations are really not very useful when it comes to survival in the real world. Adding life skills to standard school curricula would make young people become more productive when they finish school and start

finding job and starting a family of their own. The study further states that Children will achieve more in life if they know the basic skills in life which will help them to handle things as they go with their day to day activities. It is important to add life skills to standard school curricula. If this is added to the school curricula there is no problem at all with the students when they grow up and get a job of their own (Felisa Deskeo, 2002).

2.15.2. Importance of introducing life skill education in school curriculum

Life skills helps in the promotion of general well being and psychosocial competence, empower young people, promote health and positive social relationships and in building productive interpersonal relationships. Aparna.N and Raakhee (2011) found that imparting life skill education through curriculum will help adolescents to overcome complexities and difficulties of life and can play a remedial role in solving problems to lead a better life. So the study reviles that life skill education is essential for the society and every education system should integrate and impart life skill education as a part of its curriculum to develop positive health behavior, positive interpersonal relationships and well being of individuals.

Bharath Srikala, KV Kishore Kumar (2010) recommended introduction of LSE into the school curriculum with the help of resources of schools and teachers. In his study of 605 adolescent students he found improvement in adjustment of the adolescents with teachers, school and helped in increasing pro-social behavior, coping, and self–esteem, as there was a significant difference between the groups in the program. Findings reveal that Inclusion of life skills in curriculum will promote psychosocial competence and reduce problem behaviors in adolescents.

Adolescents have demands and challenges due to their physiological, psychological, social and economic situations. Life skill can be work as a means of increasing awareness and so including life skill in the school curriculum increases knowledge and prevent critical situation of life. With the objective of empowering pupils, students and their teachers with life skills, A curriculum was introduced in secondary school. Teachers reported that changes in behaviours related to substance abuse, visiting beer selling places, taking alcoholic drinks, fighting with others, and improvement in decision making, problem solving and change from immoral behaviour (Boniface Francis Kalanda 2010).

After seeing the importance of life skill education in curriculum Bouck, E.C. (2010) suggested that life skills curriculum will need to be creative in its implementation and look

towards transition plan and activities to provide students with the needed training. The study suggests that teachers should provide students with the academic skills if they need to be successful in assessment of the life skills (e.g. independent living, daily living, financial) after school in employment and independent living.

2.15.3. Need of incorporate multiple literacy curriculums in Indian school

Schools need to opt curriculum that include thinking and innovative skills; information, media, ICT literacy; life and career skills as core academic subjects. Satya Mohan, Donald Perras (2012), study dealt with the teachers perspectives on the design of the curriculum for the present and emphasizes the fact that the curriculum must incorporate multiple literacy's; promote inventive thinking, active learning and student diversity.

2.15.4. Need of vocational education in secondary school curriculum

Vineeta & Prof. Avinash's (2012) study emphasizes articulating skills in academic and vocational streams. They found that secondary school graduates are not well equipped with skills required for employability. This study clearly indicates that Teachers' beliefs, practices and attitudes are important for understanding and improving educational processes. Study shows that all countries at secondary levels of education have inadequacies and flaws. In other words secondary level education has to provide effective academic or professional education to young students to be self-employed entrepreneurs. India has already taken step in integrating vocational education in secondary school curriculum where as other countries are still evaluating the impact of recent changes.

A descriptive survey conducted by Bindhu David, Shiny John (2011) also shows a relation between Life Skills and Attitude towards Vocation among the Vocational Higher Secondary and Higher Secondary School Students of standard XI. From the analysis it can be concluded that Life Skills and Attitude towards Vocation among the Vocational Higher Secondary and Higher Secondary School Student shows a positively weaker correlation. So as the life skills increase, a favorable attitude towards vocation develops the life skills score will also increase. Present study will help educators to frame an effective curriculum for students.

2.16. CONCLUSION

Life Skills related many studies were reviewed by the investigator within India and abroad. The reviewed studies have covered different issues which were prevailing in the globe. The findings from this review suggest that the development of life skills can be important in empowering young people. However, with little consensus in the field as to the nature of life skills, a more precise definition and evaluation of life skills programmes is required in order to develop the evidence base and substantiate this claim. The literature recognises the importance of peer education as a model for life skills education. It also emphasises that the effectiveness of life skills training is largely related to the process through which it takes place, namely who delivers it and how it is developed and sustained. The curriculum content should focus on individual needs but also look to include information about wider socio-economic and political influences that may marginalise or disempower the individual. Enabling peers to deliver or co-deliver programmes is empowering and can offer an effective intervention and support that is not only helpful but is necessary for those with histories of exploitation and violence. Nevertheless, care must be taken to support peer educators themselves to ensure they will benefit and have the training and support they need to undertake and learn from the work.

Review study also suggests that most of the life skill intervention programme were effective to provide Life Skills Education to these groups. They have become aware regarding those addressed issues and behaved with responsibility in the situation. More numbers of studies have used the education as medium to inculcate the Life Skills in the adolescents. These studies have suggested that trained teachers, social workers and counselors are required for inculcating the Life Skills effectively in adolescents. The training was provided to teachers and helped them to inculcate the 46 Life Skills subject content. Only one study was conducted by Zafar (2006) in Teacher Education. In the study, teacher trainees were trained to inculcate the Life Skills with school subject and it was found an effective mean to provide Life Skills Education to adolescents at school level. These studies were found effective for developing self confidence, team sprit, self esteem, decision making and coping with emotions and stress. Almost all studies have used developmental design for developing the Life Skills Programme and experimental design for implementing developed Life Skills Programme. Very few studies have used survey and case study design. For data analyzes very few studies have used quantitative techniques where they have collected date through tests, scales and questionnaires. And most of studies have used qualitative techniques of data collection due to nature of study. The Life Skills were used as a means to develop healthy persons as it was integrated in Adolescent Education as one component. It was found an effective approach to sensitize adolescents and trained teachers were efficiently able to use the Life Skills approach to provide Adolescent Education to the adolescents (Talwar, 2007).

Chapter III

MATERIAL AND METHODS

Methodology is defined as the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and the use of methods to the desired outcomes (Crotty, 1998). It focuses on how the researcher gains knowledge about the social world, to interpret the data in the persp ective of what is already empirically proved and what can be projected for future interpretation. (Denzin and Lincoln 2000). The present chapter is devoted to methods and procedures used in the execution of the present study.

Life skill training programme was planned to assess needs of adolescents and to train them in basic life skills so they can lead their life in better way. Details of the research design, locale of the study, sample and sampling procedure, variables and their empirical measurement, collection of data and statistical methods and analytical procedures used for the analysis are discussed under the following heads.

3.1 Research design

3.2 Locale of the study

3.3 Sampling and sampling procedure

3.4 Research tool and their description

3.5 Procedure for data collection

3.6 Delimitation of the study

3.7 Analysis of data

3.8 Development of Training Module on life skill education

3.1. RESEARCH DESIGN

A research design is used to structure the research and to show how all the major parts of the research project are fitted together. As the study aimed to know need of life skill training for adolescence by assessing knowledge, attitude and belief of individuals in different areas of their

life in which they are lagging behind and planning life skill training programme for them 'Exploratory Research' approach was used.

As the name implies, the primary objective of exploratory research is to explore a problem to provide insights into and comprehension for more precise investigation. The exploratory research design is suitable for studies which are flexible enough to provide an opportunity for considering all the aspects of the problem.

3.2. LOCALE OF THE STUDY

India has the largest population of adolescents in the world being home to 243 million individuals aged 10-19 years. Adolescents aged 10–19 years constitute about one-fourth of India's population and young people aged 10–24 years about one-third of the population. This large cohort of young people represents a great demographic dividend with the potential to contribute to India's economic growth and development (Population Projections for India and States, 2011). In order to realise and utilize this potential to the fullest, young people must be healthy, educated and equipped with information, skills and confidence that would enable them to contribute to their communities and the country's socio-economic growth. The challenges facing adolescents are increasingly recognised and documented. Hence, adolescence age group was purposively selected for the present study. Different blocks of Udham Singh Nagar, Uttarakhand India were purposively chosen as locale of the study because:

- The investigator hails from Udham Singh Nagar; hence it was convenient to carry out the work in that area in terms of money, time and effort.
- Only adolescents studying in government schools were selected as a population for the present study because, students living in nearby villages go to government schools. They cannot afford private schools. Mostly their parents are not much educated so they cannot guide them in different aspects of life.
- Many People in villages suffer from narrow ideology, and have conservative mindset like child marriage, gender biasness etc. so many such topics are included in present life skill training programme which will help to change their ideology on these issues.
- They also have lack of knowledge about general health and hygiene, menstrual hygiene and sanitation, HIV AIDS etc. so present training programme will create awareness among them about these important topics.

- Private schools plan many programmes in their schools to guide their students on different aspects of life skill. They also appoint counselors for guiding them but government schools have no such facilities and provisions. Present training programme will help students to take advice from the trainer on different issues of their life.
- Findings of the study will also attract the attention of government to mandate these facilities for the students of government school as well.

Figure 3.1: Map of Udham Singh Nagar (Uttarakhand)

3.3. SAMPLE & SAMPLING PROCEDURE

3.3.1. Sampling criteria

Government school students who are in the age group of 13 to 18 years studying in different blocks of Udham Singh Nagar, Uttarakhand India, were selected as a sample for the present study.

3.3.2. Sampling technique

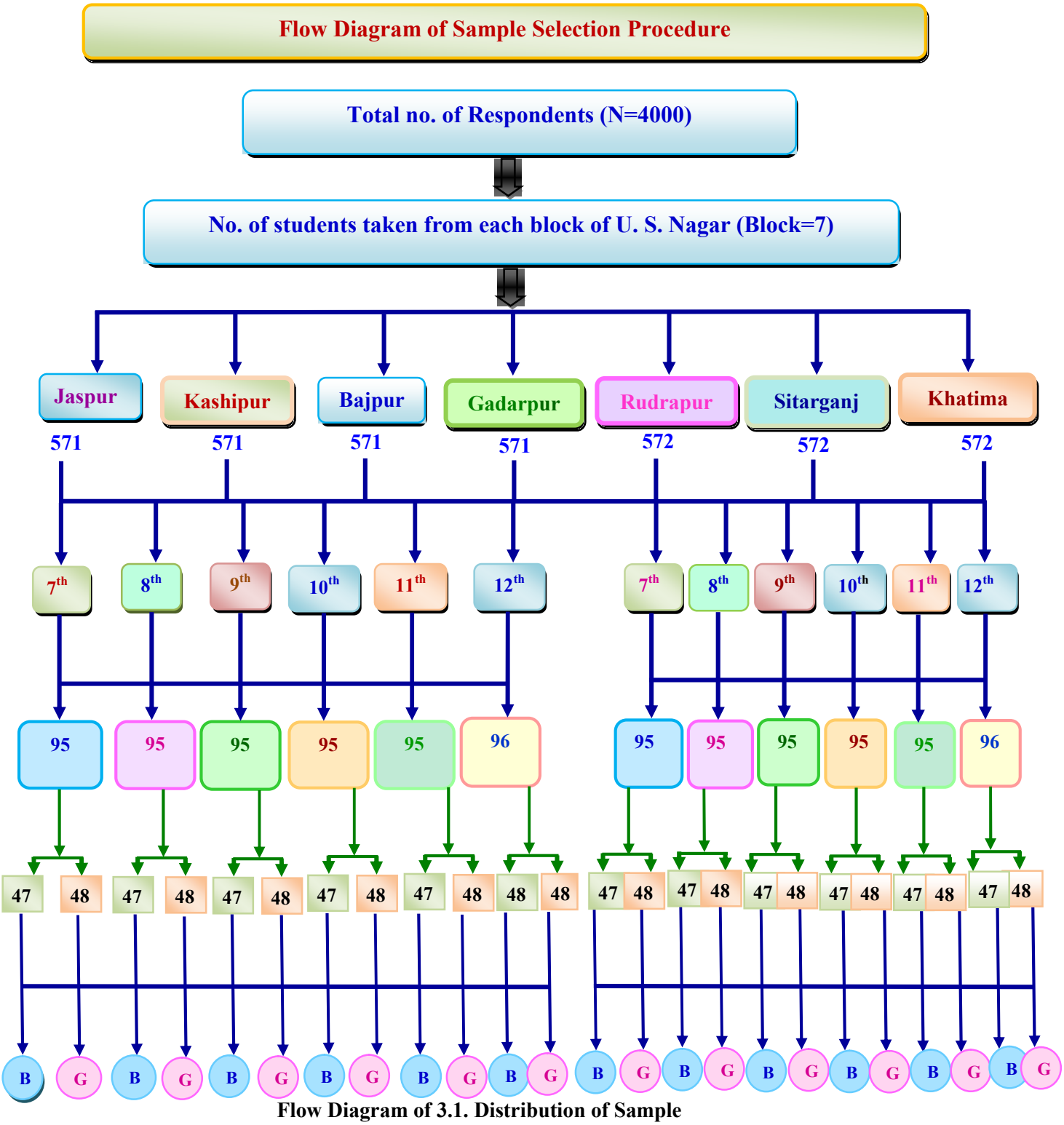
Purposive sampling techniques were used for the study (since students who were willing to fill the questionnaire were included for the study).

3.3.3. Population

Adolescent students in the age group of 13- 18 years (studying in 7th to 12^{th} grade) were considered as a population.

3.3.4. Sample size

Total 4000 + adolescent students were selected for the study in which 1,998 students were boys and 2,002 students were girls. Below Figure 3.1 shows the procedure of sample selection.



Flow Diagram of 3.1. Distribution of Sample

Table 3.1: Description of sample selection

Blocks in Udham Singh Nagar	Age Group	Grade	No. of Boys	No. of Girls	Total no. of Respondents
Jaspur	13 – 18 years	7^{th}-12^{th} Std.	285	286	571
Kashipur			285	286	571
Bazpur			285	286	571
Gadarpur			285	286	571
Rudrapur			286	286	572
Sitargunj			286	286	572
Khatima			286	286	572
Total			**1,998**	**2,002**	**4000**

3.3.5. Criteria for sample selection

- Only government school students of Udham Singh Nagar
- Students studying in 7^{th} to 12^{th} Grades
- Students of both genders
- Students under the age group of 13-18 years

3.3.6. Selection of the samples

The selection of the study comprises students of Government School studying in class 7^{th} to 12^{th} of both genders who are under the age group of 13-18 years. The total sample size was 4000 so the age groups were divided as 13-14, 14-15, 15-16, 16-17 and 17-18. To obtain 4000 sample size approximately 571 – 572 respondents from each age group were selected in which approximately 286 respondents were boys and 286 were girls. From each age group few extra responses were taken because of incompletely filled questionnaires. Only complete questionnaires comprise complete information were included for the study.

3.4. HYPOTHESIS

1. Respondents studying in higher grades (10^{th}, 11^{th}, & 12^{th}) may have more knowledge on different aspects of life skills compared to respondents studying in lower grades (7^{th}, 8^{th}, & $9^{th)}$.

2. Girl respondents (particularly studying in higher grades) tend to have more liberal view on gender stereotyping compared to boys.

3. Education of father and mother may also impact the knowledge of respondents. Respondents whose mother and father are educated may have more knowledge on different aspects of life skill education compared to the respondents of uneducated parents.

4. Family type may also impact need and knowledge of respondents on different selected aspects of life skill education. Respondents from joint family may have more knowledge compared to respondents from nuclear family.

5. Students studying in higher grades may express greater need of career counselling compare to respondents studying in lower grades. Gender differences may also observed in expressing need for career counselling. Boys may express greater need compared to their girl's counterpart due to conservative mindset of family and society toward girl's education and employment.

6. Same trend may also observe in the area of acquiring leadership skills and qualities. Boys may express greater leadership skills compared to their girl counterpart specially boys studying in higher grades.

3.5 VARIABLES AND THEIR EMPIRICAL MEASUREMENT

Present study was an exploratory research study and designed to understand the need of life skill training for adolescents studying in government schools of Udham Singh Nagar. For this purpose students studying in class 7^{th}-$12^{th,}$ both boys and girls were selected for study. The study included both independent and dependent variables and the relationship between the independent variable and the dependent variables are studied in the present investigation. The details of independent and dependent variables are given below.

3.5.1. Independent variables

The independent variables are the factors which are selected by the researcher to determine their relationship with the observed phenomenon. In the present study the independent variables are as follows:

- Age
- Class
- Gender
- Religion
- Education of father
- Education of mother
- Family type
- Occupation of father
- Occupation of mother
- Monthly family income

3.5.2. Dependent variables

Dependent variable is the phenomena of interest to the researcher which varies with respect to the independent variables and other intervening variables. The dependent variable in the present study is:

- Need of life skill education

3.5.3. Operational definition of the dependent and independent variables of the study

Operational definition defines concepts in terms of operations or process. “An operational definition assigns meaning to a construct or variable by specifying the activities or operations necessary to measure it”. Alternatively an operational definition is a specification of the activities of the researcher in measuring a variable or in manipulating it. It gives or defines meaning to a variable by spelling out what the investigator must do to measure it (Kerlinger 1995).

3.5.4. Independent variables:

The following independent variables were considered for the study. A brief explanation has been given for choosing these variables as independent variables.

1. **Age:** the chronological age of the respondent
2. **Gender:** boys and girls
3. **Class:** students studying in 7^{th} to 12^{th} grades.
4. **Religion:** Hindu, Muslim, Sikh, Christian
5. **Education of father:** the highest grade level completed by father
6. **Education of mother:** the highest grade level completed by mother
7. **Family type:** joint/nuclear/single parent
8. **Occupation of father:** father's usual or principal work or business as a *means* of earning a living
9. **Occupation of mother:** mother's usual or principal work or business as a *means* of earning a living
10. **Monthly family income:** total monthly income of the family from all the sources

3.5.5. Dependent variables:

Need of life skill education: individual's need of life-skill education based on their knowledge such as knowledge on health, hygiene, nutrition, gender imbalance, child marriages, HIV AIDS, need of career counselling and building leadership skills.

3.6 RESEARCH TOOL AND THEIR DESCRIPTION

To accomplish the objectives of the present study self-structured tool on "Need Assessment of Life skill education for Adolescents" was developed and used. Tool was used at two stages. In the first stage tools were used for sample selection, and in the second stage tools were administered on selected sample. Ensuing segment of the chapter is going to describe the

details of tools, which were used in two stages. Due to the paucity of availability of standardized tools for present study investigator decided to construct the present tool, which are as follows.

3.6.1Development of research tool (A battery of Structured Questionnaires on adolescent's knowledge, attitude and practices of different life skills)

3.6.1.1 Questionnaire formation

3.6.1.2 Steps of Developing "Need assessment questionnaire on Life Skill education".

3.6.2 Establishing reliability and validity of research instrument

3.6.3 Reliability Coefficient of the Scales

3.6.1. DEVELOPMENT OF RESEARCH TOOL:

Questionnaires are the most frequently used data collection method in educational and evaluation research. Questionnaires help to gather information on knowledge, attitudes, opinions, behaviors, facts, and other information. Radhakrishna *et al.* (2003) found that 64% researchers used questionnaires in agricultural, Extension education and allied subjects studies. They also found that a third of the studies reviewed did not report procedures for establishing validity (31%) or reliability (33%). Development of a valid and reliable questionnaire is a must to reduce measurement error. Groves (1987) defines measurement error as the "discrepancy between respondents' attributes and their survey responses".

Development of a valid and reliable research tool involves several steps and takes considerable amount of time. Sequential steps followed in the development and testing of present research instrument (need assessment questionnaire on life skill education for adolescents) are given below.

3.6.1.1. Questionnaire formation:

This section describes the process which was used for developing and testing questionnaires on need assessment of life skill training for adolescents. A Battery of Structured Questionnaire on "Need of Life skill education for Adolescents" was developed in Hindi and English, keeping in view the information to be collected for the study. The questionnaire is divided into two part, part A and part B. Through "Part A" general information of subjects were

collected and "Part B" is again subdivided into nine parts. In Part B questions on different aspects of life skills were asked to check the individual's knowledge, attitude and practices on different component of Life skills. The questionnaire consisted of following –

Part A

Personal and parental information of the respondents– name, age, gender, class, religion, place of residence, education of mother, education of father, occupation of mother, occupation of father, family income, Family type.

Part B

- Questionnaire on General and reproductive health
- Questionnaire on Personal, Environmental and food related cleanliness
- Questionnaire on Girl's personal hygiene
- Questionnaire on HIV AIDS
- Questionnaire on Drug Abuse
- Questionnaire on Child marriage
- Questionnaire on gender imbalance
- Questionnaire on Career counseling
- Questionnaire on Leadership skills

3.6.1.1.1 General and Reproductive Health Knowledge Questionnaire (GRH-KQ):

A knowledge questionnaire, originally constructed by Mathur (1997) for the teacher on selected aspects of sex-education was adopted and modified by Wasan (1999) for adolescent girls were again revised by investigator for the present research. The modification was done in the content of questionnaire. Questions which were not related to selected aspects of life skill education were deleted and other important questions were added in questionnaire. Total 17 questions were kept in this questionnaire to check the knowledge of respondents in this area.

Scoring: For this purpose scoring key was prepared by investigator. There were multiple choices for each question in the questionnaire. Every right answer/response was assigned (1) one mark and wrong were answers assigned (0) zero marks. The sum of marks was obtained for the entire scale. The maximum score was 17 and minimum score was zero. The total knowledge of

respondents was categorized as low, moderate and high knowledge. The description regarding scoring to assess the level of knowledge of respondents is give in table 3.2

Table 3.2: Scoring of General and Reproductive Health-Knowledge Questionnaire (GRH-KQ):

Total no. of Questions	17
Level of Knowledge on general and reproductive health and its scoring	High (12-17) Moderate (6-11) Low (0-5)

3.6.1.1.2 Personal, Environmental and Food Related Cleanliness Knowledge Questionnaire (PEF-CKQ):

Present questionnaire was prepared after reviewing available content on this topic from Internet, books, journals, magazine and newspapers. To check respondent's knowledge in these area statements were formulated from the content and modifications were made in the language of questions. Irreverent questions were deleted and finally 17 questions were kept in the final questionnaire of (PEF-CKQ).

Scoring: There were multiple choices for each question in the questionnaire. Every right answer/responses were assigned (1) one mark and wrong answer were assigned (0) zero marks. The sum of marks was obtained for the entire scale. The maximum score was 17 and minimum score was zero. The overall knowledge of respondents in this area was categorized as low, moderate and high. The description regarding scoring is give in table 3.3

Table 3.3 Scoring of Personal, Environmental and Food Related Cleanliness Knowledge Questionnaire (PEF-CKQ):

Total no. of Questions	17
Level of Knowledge on Personal, Environmental and Food Related Cleanliness and it's scoring	High (12-17) Moderate (6-11) Low (0-5)

3.4.1.1.3 Girl's Personal Hygiene Knowledge Questionnaire (GPH-KQ):

The same procedure was followed to develop present questionnaire also which was followed for developing earlier questionnaires. There were total 14 questions in this

questionnaire. The questions were formulated to check knowledge, attitude and behaviour of respondents in this area.

Scoring: There were multiple choices for each question in the questionnaire. Every right answer/response assigned (1) one mark and wrong answer assigned (0) zero marks. The sum of marks obtained for entire scale. Scoring was only done for knowledge questions in questionnaire which was from question 2-10. Question 1 and 11 checks attitude and 12-14 checks practices of respondents on present topic. For questions 1 & 11-14 only percentages and frequencies were calculated as scoring was not possible for these questions. The maximum score obtained by an individual was 9 and minimum score was zero. The knowledge of respondents were categorized as low, moderate and high based on the scores. The description of scoring to assess the level of knowledge of respondents is give in table 3.4

Table 3.4: Scoring of Girl's Personal Hygiene Knowledge Questionnaire (GPH-KQ)

Total no. of Questions	14
Questions on Knowledge Questions on Attitude Questions on Behaviour	Q. No. (2-10) Q. No. (1&11) Q. No. (12-14)
Level of Knowledge on personal hygiene and scoring	High (6-9)
	Moderate (3-5)
	Low (0-2)

3.6.1.1.4 HIV Knowledge Questionnaire (HIV-KQ):

This questionnaire was prepared after reviewing available content on this topic from Internet, books, journals, magazine and newspapers. To check respondent's knowledge in this area, statements were formulated from the content and modifications were made in the language of questions. Irrelevant questions were deleted and finally 13 questions were kept in this questionnaire (HIV-KQ).

Scoring: There were multiple choices for each question in the questionnaire. Every right answer/response was assigned (1) one mark and wrong answers were assigned (0) zero marks. The sum of mark was obtained for the entire scale. The maximum score was 13 and minimum score was zero. The knowledge score of respondents was categorized as low, moderate and high. The description regarding scoring to assess the level of knowledge of respondents on HIA AIDS is give in table 3.5

Table 3.5: Scoring of HIV Knowledge Questionnaire (HIV-KQ)

Total no. of Questions	13
Level of Knowledge on HIV AIDS and it's scoring	High (10-13) Moderate (5-9) Low (0-4)

3.6.1.1.5 Drug Abuse Questionnaire (DA-Q):

This questionnaire was prepared after reviewing available content on this topic from Internet, books, journals, magazine and newspapers. To check respondent's knowledge and their opinion on this topic, statements were formulated from the content and modifications were made in the language of questions. Irrelevant questions were deleted and finally 8 questions were kept in the final questionnaire (DA-Q).

Scoring: There were multiple choices for each question in the questionnaire. Percentages and frequencies were calculated to check respondent's knowledge/view on this particular topic. Scoring was not done because there is no right and wrong answers in this questionnaire.

3.6.1.1.6 Child Marriage Questionnaire (CM-Q)

For developing this questionnaire same procedure was followed which was followed for the development of above questionnaires. Total numbers of questions in this questionnaire were ten.

Scoring: There were multiple choices for each question in the questionnaire. Percentages and frequencies were calculated to check respondent's knowledge/view on this particular topic. Scoring was not done because there were no right and wrong answers in this questionnaire.

3.6.1.1.7 Knowledge on Gender Imbalance Questionnaire (KGI-Q)

Same procedure was followed for developing this questionnaire which was followed for above questionnaires. Total numbers of questions in this questionnaire were eighteen which checks knowledge and views of respondents in this area.

Scoring: There were multiple choices for each question in the questionnaire. Every right answer/response was assigned one mark and wrong answers were assigned zero marks. The sum of mark was obtained for the entire scale. The maximum score was 18 and minimum score was zero. The score of respondents was categorized as low, moderate and high knowledge. The description regarding scoring to assess the level of knowledge of respondents is give in table 3.6

Table 3.6: Scoring of Gender Imbalance Questionnaire (KGI-Q)

Total no. of Questions	18
Level of Knowledge on gender imbalance and scoring	High (12-18) Moderate (6-11) Low (0-5)

3.6.1.1.8 Career Counseling Questionnaire (CC-Q)

Present questionnaire was prepared to check individual's knowledge and need of career counseling. Total thirteen questions were kept and the same procedures were followed in developing this questionnaire which was followed for above questionnaires.

Scoring: There were multiple choices for each question in the questionnaire. Percentages and frequencies were calculated to check respondent's need and knowledge about career counseling. Scoring was not done for this particular questionnaire because there were no right and wrong answers in this questionnaire.

3.6.1.1.9 Leadership Skill Questionnaire (LS-Q)

Same procedure was followed for the development of this questionnaire which was followed for above questionnaires. Total numbers of questions in this questionnaire were eighteen which checks individual's leadership quality.

Scoring: There were multiple choices for each question in the questionnaire. For every question respondents were assigned 0, 1 or 2 marks based on their qualities and behaviour. Scoring key was prepared and marks were given on the basis of that key. The sum of mark was obtained for the entire scale. The maximum score was 36 and minimum score was zero. The score of respondents was categorized as low, moderate and high leadership qualities. The description regarding scoring to assess the level of leadership skills of respondents is give in table 3.7

Table 3.7: Scoring of Leadership Skill Questionnaire (LS-Q)

Total no. of Questions	18
Type of Leadership skill and scoring	High (24-36) Moderate (12-23) Low (0-11)

3.6.1.2. Steps of Developing "Need assessment questionnaire on Life Skill education"

Development of present research tool posits five sequential steps: research background, questionnaire conceptualization, format and data analysis, and establishing validity and reliability. Systematic development of questionnaires is a must to reduce many measurement errors. Following these five sequential steps was used for questionnaire development and testing to enhance data quality and utilization of research. Fig. 3.3 illustrates the five sequential steps involved in questionnaire development and testing. Each step depends on fine tuning and testing of previous steps that must be completed before the next step. A brief description of each of the five steps follows Fig. 3.3.

3.6.1.2.1. Step 1- Collecting background information:

In this first step, the purpose, objectives, research questions, and hypothesis of the proposed research are to be established. Determining the audience, their background, especially their educational/readability levels, access, and the process used to select the respondents (sample vs. population) are also part of this step. Literatures were reviewed on life skill education for adolescents available on internet, books, newspapers, magazines, journals to have thorough understanding of the problems.

3.6.1.2.2. Step 2 - Questionnaire conceptualization:

After developing a thorough understanding of the research, the next step was to generate statements/questions for the questionnaire from available literature. These statements should be based on the aim and objectives of our research. In this step, content (from literature/ theoretical framework) was transformed into statements/questions. In addition, a link among the objectives of the study and their translation into content was established. For example, while making questionnaire for checking adolescent knowledge and awareness on HIVAIDS, to understand their need for life skill education which is an important component of life skill education, the researcher must indicate what the questionnaire is measuring, that is, knowledge, attitudes, perceptions, opinions, recalling facts, behavior change, etc. Major variables (independent, dependent) should also identify and defined in this step.

3.6.1.2.3. Step 3 - Format and data analysis:

In this step, the focus was given on writing statements/questions, selection of appropriate scales of measurement (ordinal, nominal, and ratio), format and layout of questionnaire, ordering of questions in questionnaire, font size, and proposed data analysis. Language of the questionnaire should be easily understandable by the study population. Scales are devices used to quantify a

subject's response on a particular variable. Understanding the relationship between the level of measurement and the appropriateness of data analysis is important. For example, if ANOVA (analysis of variance) is one mode of data analysis, the independent variable must be measured on a nominal scale with two or more levels (yes, no, not sure), and the dependent variable must be measured on an interval/ratio scale (strongly agree to strongly disagree). Dummy table was to be prepared and statistical tools are finalized to ensure that all the data collected through questionnaire shall be subjected to analysis and inference drawing. Data analysis tool shall be such that all the objectives of research project can be concluded.

3.6.1.2.4. Step 4 - Establishing validity:

Validity refers to how well a test measures what it is purported to measure. Validity is the amount of systematic or built-in error in measurement (Norland, 1990). Validity was established using a panel of experts and a field test. As a result of Steps 1-3, a draft questionnaire was ready for establishing validity. Content validity method was used for calculating the validity of developed research instrument. The following questions were addressed in Step 4 for establishing validity of the scale:

– Is the questionnaire valid? In other words, is the questionnaire measuring what it intended to measure?

– Does it represent the content?

– Is it appropriate for the sample/population?

– Is the questionnaire comprehensive enough to collect all the information needed to address the purpose and goals of the study?

– Does the instrument look like a questionnaire?

Content validity of the scale was obtained by seeking expert advice from 10 experts in the field of Human Development, Food and nutrition, extension education, Clothing and Textiles, Family Resource Management, Social work, Sociology and Psychology and the questionnaire was developed. Their suggestions were incorporated and the schedule was finalized.

3.6.1.2.5. Step 5 - Establishing reliability:

Reliability is the degree to which an assessment tool produces stable and consistent results. By establishing Reliability we can reduce the chances of random errors in measurement. According to Norland (1990) Reliability indicates the accuracy or precision of the measuring instrument. The pilot test seeks to answer the question; does the questionnaire consistently measure whatever it measures? In this fifth and final step of establishing reliability of the questionnaire, pilot test

was carried out on 60 respondents. Two types of procedures namely test-retest and split half methods were used to find out the reliability of the scale.

Flow Diagram 3.2 Steps of Establishing Reliability and Validity of Research Instrument

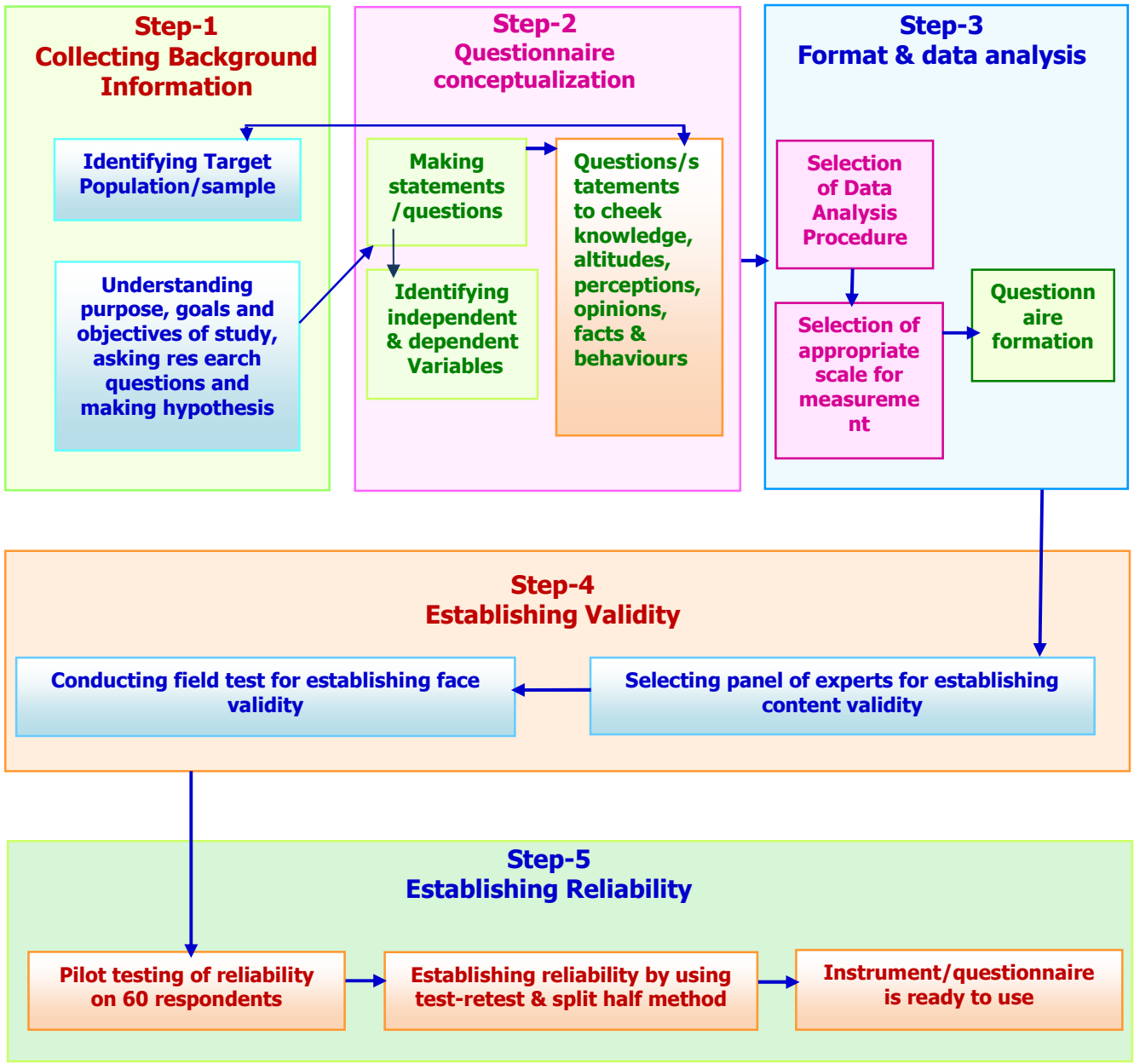

Step-1
Collecting Background Information
Identifying Target Population/sample
Understanding purpose, goals and objectives of study, asking res earch questions and making hypothesis
Step-2
Questionnaire conceptualization
Making statements /questions
Identifying independent & dependent Variables
Questions/s tatements to cheek knowledge, altitudes, perceptions, opinions, facts & behaviours
Step-3
Format & data analysis
Selection of Data Analysis Procedure
Selection of appropriate scale for measureme nt
Questionn aire formation
Step-4
Establishing Validity
Conducting field test for establishing face validity
Selecting panel of experts for establishing content validity
Step-5
Establishing Reliability
Pilot testing of reliability on 60 respondents
Establishing reliability by using test-retest & split half method
Instrument/questionnaire is ready to use

Figure 3.3 Steps of research Questionnaire/Instrument development on need of life skill training for adolescents

3.6.2. Establishing reliability and validity of research instrument

In order to have confidence in the results of a study, one must be assured that the questionnaire consistently measures what it purports to measure when properly administered. In short, the questionnaire must be both valid and reliable. This section of this chapter will comprehensively explore and describes the validity and reliability of a developed research instrument (with special reference to questionnaire) developed for assessing, need of life skill education for adolescents in government schools of Udham Singh Nagar. During pretesting, reliability and validity of the Developed research instrument which was in the form of questionnaire, was determined and scale was found highly reliable and valid. Reliability of the instrument was determined by using test retest reliability and split half method.

3.6.2.1.Validation of the scales:

The validity of the test depends upon the fidelity with which it measures what is expected to measure. In the present study the investigator established the content validity of the questionnaires.

3.6.2.2.Content Validity:

For content validity, scales were given to experts for critical and judicious judgments. The experts were requested to evaluate the tool in terms of – language of the statements, clarity in the statements, format of the statements, length of the tool, scoring pattern of the scales, appropriateness of the tool as per objectives, terminologies used in scales and overall expression of the tool.

The panel of experts was formed including various department and fields relevant with research. Content validity of the scale was obtained by seeking expert advice from 30 experts in the field of Human Development, Social work, Sociology, Psychology and Medical science on the questionnaire developed. Very valuable and useful feedback was received regarding the content of all the scales. The scale was checked by Hindi languages experts. After evaluation of content of scale, panel members suggested certain changes which were eventually incorporated and the scale was finalized.

The validation of scale was based on five point rating scale – excellent, very good, good, fair and poor. A score 5 was sought for 'excellent', 4 for 'very good', 3 for 'good', 2 for 'fair' and 1 for poor rating. For quality ranking of scales on the basis of technical assessment mean scores were computed for selected parameters.

Consequently mean scores for the ranking of scale were as follow:

Poor	1 – 1.8
Fair	1.9- 2.6
Good	2.7-3.4
Very Good	3.5- 4.2
Excellent	4.3 – 5

The calculated mean score were obtained as 4.0 for need assessment of life skill training scale and found that the scales was valid instrument to assess adolescents need towards life skill training programme. Further, instruction manual was also developed for each sub categories of the scale for future usability which included introduction, main features of the scale, instruction before using the manual, scoring procedure, reliability and validity.

3.6.3. Reliability Coefficient of the Scales:

To establish reliability of the research tool, it was administered on a group of minimum 40 subjects, which were not included in the final sample under study. Thus, a pilot study was done to test the reliability of scales. Forty adolescent students from the age group of 13 – 18 years (20 girls and 20 boys) were selected randomly from the Rudrapur block of Udham Singh Nagar (Uttarakhand). Reliability of tool was determined at 5% level of significance. Two types of procedures namely test-retest and split half methods were used to find out the reliability of the scale.

3.6.3.1. Split half method:

It is another subtype of internal consistency reliability. The process of obtaining split half reliability is begun by "splitting in half" all items of a test that are intended to probe the same area of knowledge in order to form two "sets" of items. The entire test is administered to a group of individuals, the total score for each "set" is computed, and finally the split-half reliability is obtained by determining the correlation between the two total "set" scores (Colin and Julie, 2006).

For establishing split-half reliability of the scale, 60 respondents were randomly selected and scale was administered on them. Data of these 60 respondents were not included in the final analysis. After data collection the questions or items of the scale were divided into two equal halves with odd numbered items on one side and even numbered items on the other side. Both halves were considered as a separate schedule. To find out the agreement between two sets of statements of the schedule for each individual the reliability coefficient (coefficient of correlation) was calculated.

3.6.3.2.Co-efficient of correlation

$$r = \frac{\sum_{i=1}^{n} x_i y_i - \frac{\left(\sum_{i=1}^{n} x_i \sum_{i=1}^{n} y_i\right)}{n}}{\sqrt{\left(\sum_{i=1}^{n} x_i^2 - \frac{\left(\sum_{i=1}^{n} x_i\right)^2}{n}\right)\left(\sum_{i=1}^{n} y_i^2 - \frac{\left(\sum_{i=1}^{n} y_i\right)^2}{n}\right)}}$$

Where

r = correlation co-efficient

x_i and y_i = the two variables in each cases

n = Total no. of observations

Reliability co-efficient of the whole scale was calculated by Spearman Brown Prophecy formula.

$$r_{tt} = \frac{2\, r_{hh}}{1 + r_{hh}}$$

r_{tt}= reliability co-efficient of whole test in split half technique

r_{hh} = reliability co-efficient of half test in split half technique

Significance of the reliability coefficient is estimated by following formula:

$$t = \frac{r}{\sqrt{1 - r^2}} X \sqrt{n - 2} \quad \sim n - 2\, d.f.$$

Coefficient of correlations between the two sets of scores obtained by Spearman Brown formula was found to be highly significant (r=0.87) at 0.01 level of probability indicating high internal consistency of the developed scale. So we can say that the developed scale is highly suitable to check the need of life skill training for adolescents.

Table 3.8 Reliability Index of scales: **n=60**

Tool	Reliability Index
Need assessment scale on life skill training	0.87*

* Significant at 0.01 per cent level of significance

3.6.3.3. Test-retest method:

Test-retest reliability is a measure of reliability obtained by administering the same test twice over a period of time to a group of individuals. The scores from Time 1 and Time 2 can then be correlated in order to evaluate the test for stability over time (Colin and Julie, 2006).

The scale was administered twice to 60 respondents who were in the range of 13-18 years age groups, studying in class 7th to 12, outside the study area within 6 weeks interval. The calculated test retest reliability for the scale was r=0.87 indicating that the instrument is highly suitable for need assessment of adolescents on life skill training in schools as the scale was stable and dependable in its measurement.

3.7. PROCEDURE OF DATA COLLECTION

Before planning intervention, a need assessment survey was conducted on approximately 4000 adolescents (boys and girls) studying in government schools of Udham Singh Nagar with the help of self-structured need- assessment questionnaire to know their need in different areas. This questionnaire was formulated on the bases of earlier visits made by the researcher in schools. In her visit researcher found that majority of adolescents were unaware about many general aspect of research such as health and hygiene, Sanitation related issues etc. along with poor/deficient knowledge in these areas, adolescents neither had any guidance regarding their future plans nor any clarification about social problems like AIDS, early marriage etc. girls are still getting married after intermediate. Inferences drawn from school visits, observations and

communicating with adolescents in schools on various issues a need assessment questionnaire was designed on following topics-

- ✓ General Health and hygiene
- ✓ Environmental health and hygiene
- ✓ Personal health and hygiene for girls
- ✓ HIV AIDS
- ✓ Drug abuse
- ✓ Child marriage
- ✓ Gender imbalance
- ✓ Career counselling
- ✓ Leadership skills

These subjects are not directly related to ten core life skills given by WHO but indirectly all these issues are related, like Decision making helps to come up to formative decisions having consequences impacting over their health and growth. Similarly, problem solving enables us constructively conquer coming problems in our life. For data collection all the principles and teacher of the school were contacted and permission was taken from them for data collection. The investigator assisted the respondents in filling up the questionnaire. The Detailed description of the procedure of data collection is give in following stages-

3.7.1. Stage: I: In stage I, Preliminary survey was done in 5 schools selected from three blocks of U.S. Nagar namely Kichha, Rudrapur, Gadarpur. Two school from Rudrapur and Gadarpur and one from Kichha were selected for this purpose. Out of these five schools 100 students studying in different classes of 7^{th} to 12 grades were selected which is described in the table given below-

Table 3.9 Distribution of sample for preliminary need assessment survey:

Sample for preliminary study (N=100)			
Perticulars			
Blocks selected	**No. of school from each block**	**No. of students from each block**	**No. of boys and Girls from each school**
Kiccha	1	20	10
			10
Rudrapur	2	40	20
			20
Gadarpur	2	40	20
			20
Total	5	100	100

3.7.2 Stage: II: In this stage pretest was done on 4000 sample to find out need of life skill training for adolescents. Total 4000 students (2,002 girls 1,998 boys) were selected from 7 different blocks of Udham Singh Nagar was studying in different grades from 7^{th} to $12^{th.}$ Distribution of sample in this stage is described in the table given below-

Table 3.10 Distribution of sample for the stage 2 (final) need assessment survey:

Blocks in Udham Singh Nagar	**Age Group**	**Grade**	**No. of Boys**	**No. of Girls**	**Total no. of Respondents**
Jaspur	13 – 18 years	7^{th} -12^{th} Std.	285	286	571
Kashipur			285	286	571
Bazpur			285	286	571
Gadarpur			285	286	571
Rudrapur			286	286	572
Sitargunj			286	286	572
Khatima			286	286	572
Total			**1,998**	**2,002**	**4000**

3.7.3. Stage: III Development of module: - In this stage on the basis of findings of need assessment survey, training modules was developed on identified needs of adolescents. Modules were based on different topics and activities to make the whole training programme interesting. While planning activities age and knowledge level of respondents were kept in mind. Informations were disseminated in the form of storytelling, games, science experiments and lots of real life experiences and examples. Active participation of respondents and their teachers were mandatory. For the convenience of students and teachers module is designed in both languages Hindi and English.

3.7.4. Stage: IV: **Providing life skill training: -** It was not possible for the researcher to provide life skill training to all 4000 respondents selected for data collection. For this purpose few students and teachers were identified and selected for the present training programme. A selection criterion was based on the keen interest of the participants and their feedback received from their class teachers. Only those students, who can assist their teachers in training other

students, were selected. These trained teachers and student will act as a key trainer to train other students of their school studying in different classes. After completion of training printed copy of modules were also distributed to them which can be used further while training other students.

3.7.5. Stage: V: Conducting post test: - In this stage Post test was planned for 500 students who received life skill training, to find out the effect of life skill training on adolescents. Post test analysis, was planned in two staged first post test was planned on completion of each intervention and second post test was planned after completion of whole Intervention. But due to "corona virus pandemic" schools were closed and lock down was implemented in country so posttest was cancelled.

3.8. DELIMITATION OF THE STUDY

Every study needs to be delimited according to the prevailing conditions and circumstances. The present study has de-limitations with regard to the following:

- The respondents were purposively selected for the present study as many respondents hesitated to give their personal opinion and information on the topics like Drug abuse, General and personal health and hygiene, HIV AIDS, Gender equality and discrimination etc. even though the study was based only on their knowledge, attitude and practices.
- It was difficult to collect data from female respondents compared to male respondents in the conservative society like India.

- The study is delimited to 4000 respondents of 13 to 18 year age group. Less than 13 year of respondents were not selected due to the sensitivity of few topic.
- The study is delimited to different blocks and selected schools of Udham Singh Nagar.
- The study only includes Government school students. Such study can also be planned for training private school students.
- The scale was limited to nine subcategories and total 123 questions. Many topics were not included due to time constrain and the sensitivity of the topic.
- The major limitation of the study was observed during unpredicted "corona virus pandemic" because of which post test was not implemented during study which was planned to know the effectiveness of intervention programme on adolescents.
-

3.9. ANALYSIS OF DATA

After data collection, it is necessary to analyze it with the help of statistics to arrive at conclusions. Use of statistical measures helps to consolidate the huge data and explore the truth. It also provides a quantitative base to research results. To analyze the collected data, the information gathered was coded, categorized, scored and statistical computation was done according to the requirement of the objectives of the present study.

3.9.1. Categorizing and coding of background information: The information gathered through background information under section A of questionnaire, were coded for all the respondents under personal information and parental information category.

3.9.2. Categorization and coding of need assessment questionnaire on Life skill education: For the purpose scoring, key was prepared by investigator as described in tool construction section. Data was coded regarding range of scores described before each tool. In order to analyze the gathered data to answer the research objectives, 1) assessment of the knowledge, attitude and behaviour of adolescents regarding different aspects of Life skill education and, 2) impact of different independent variables (age, gender, place of residence, parents Education, family income) on dependent variable (life skill education), the following statistical techniques were used viz-

- Percentage
- Chi-square test
- Z-Test

3.9.2.1. Percentage: Sample comparison was made on the basis of percentage. Percentage is the frequency of particular cell multiplied by 100, divided by total number of respondents in the particular category.

Formula = $P = \frac{n}{N} \times 100$

Where,

'n' denotes frequency of particular cell.

'N' denotes total number of respondents in that particular category

'P' denotes the percentage

3.9.2.2. Chi square test- Chi square test can be used in the context of sampling analysis for comparing a variance to theoretical variance. As a non-parametric test it can be used to determine if categorical data show dependency or two classifications are independent. It was used to compare the experimentally obtained results with those to be expected theoretically on the hypothesis of equal probability. The equation for chi square ($\chi 2$) is stated as follows: -

$$\chi^2 = \Sigma\left(\frac{(O-E)^2}{E}\right) \sim \chi^2_{(r-1)(s-1)d.f.}$$

Where

χ^2 denotes the value of Chi-square

'O' denotes observed frequency.

'E' denotes expected frequency.

'r' denotes rows

's' denotes columns

3.9.2.3. Z-Test: Test for difference between two samples: Z-test was computed to study effect of age, gender and other independent variable on Knowledge attitude and behaviour of adolescents about different aspects of life skills.

$$Z = \frac{\bar{x} - \bar{y}}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}}$$

$\bar{x}$ = Mean score of 1st sample

$\bar{y}$ = Mean score of 2nd sample

σ_1= Standard deviation of 1st sample

σ_2= Standard deviation of 2nd sample

n_1 = Size of 1st sample

n_2 = Size of 2nd sample

3.10. DEVELOPMENT OF TRAINING MODULE ON LIFE SKILL EDUCATION

To know the need of life skill education for adolescents, need assessment survey was conducted at the beginning of this study and Training module was developed on the basis of identified needs of adolescents (Training Module on Life Skill Education for Adolescents). Present module was developed after taking experts advise on research results and by reviewing various sources like-books magazines, newspapers, and researches. Major goal behind development of this module was to enhance the knowledge and attitude as well to reduce the psychological stress of adolescents regarding their future plan. Experts were consulted while content development of the module and the module was said to be the source of sufficient information to enhance Life Skill education for adolescents. The focal points of the training module are given in table 3.11.

Table 3.11 **Focal points covered in Life Skill Training Module**

Introductory note
Life Skill education
Importance of Life Skill education in Schools
Importance of Life Skill education in Schools
Principles in teaching life skill education
Methods of teaching life skill education
Problems among students
About the Module Part 1 Health and Nutrition
Part 2 Hygiene and Sanitation
Part 3 personal health and Hygiene
Part 4 HIV AIDS
Part 5 Substance drug use, misuse and abuse
Part 6 Eliminating child marriage and gender based violence
Part 7 Understanding gender equality & inequality
Part 8 Career Counselling
Part 9 Improving Leadership Skills

Chapter IV

RESULTS AND DISCUSSION

Present chapter deals with the findings of the study. After collecting the data on need of life skill training programme for adolescence data was analyzed. For analysis of data frequencies, percentages and Chi-sq - X^2 test was used to understand the relationship between individual's knowledge on different component of life skills and selected variables. The findings of the study are presented in the following sections.

Section – 1 Demographic characteristics of individual

Section – 2 Overall knowledge of respondents on various selected components of life skill education

Section – 3 Knowledge on nutrition and reproductive health

Section – 4 Knowledge on personal, environmental and food related cleanliness

Section – 5 Knowledge on girl's personal hygiene

Section – 6Knowledge on HIV AIDS

Section – 7 Knowledge on substance use and abuse

Section – 8 Knowledge on child marriage and related issues

Section – 9 Knowledge on gender imbalance

Section – 10 Knowledge on career counselling

Section – 11 Knowledge on leadership skills

SECTION 1: DEMOGRAPHIC CHARACTERISTICS OF INDIVIDUAL

This section gives the idea about demographic characteristics of individual. For easy comprehension the data is presented through tables.

Table 4.1: Frequency and Percentage distribution of demographic characteristics of population

Variables	Frequency (f)	Percentage (%)
Block		
Gadarpur	711	16.8
Jaspur	707	16.7
Kashipur	722	17.1
Kicha	707	16.8
Rudrapur	683	16.1
Sitarganj	700	16.5
Class		
7^{th}	703	16.6
8^{th}	780	18.4
9^{th}	660	15.7
10^{th}	692	16.4
11^{th}	703	16.6
12^{th}	692	16.3
Gender		
Female	2,159	51.0
Male	2,071	49.0
Religion		
Hindu	2390	56.5
Muslim	1807	42.8
Punjabi	33	0.78
Type of Family		
Joint	1046	24.7
Single/Nuclear	3184	75.3
Age		
Less than or equal to14 years	2166	51.2
Greater than 14 years	2064	48.8
Income		
Less than 1500	924	25.6
1501-3000	913	25.3
3001 to 8000	1008	28.0
More than 8001	763	21.1
Father's Education		
Graduation	64	1.8
ITI	3	0.1
MBA	4	0.1
Master	47	1.3
Primary	701	19.8
Six to Intermediate	1475	41.9
Uneducated	1236	35.0
Mother's Education		
BA	88	2.6

Primary	436	12.6
Uneducated	2065	59.8
Six to Intermediate	862	25.0
Father's Occupation		
Business	472	11.1
Farmer	562	13.3
Labour	2684	63.5
Service	439	10.4
Unemployed	73	1.7
Mother's Occupation		
Business	9	0.2
Farmer	30	0.7
Housewife	3781	89.4
Labour	404	9.6
Service	6	0.1

The table 4.1 illustrates the frequency and percentage distribution of various characteristics of population. The maximum percentage (17.1%) of subjects belonged to Kashipur block. Similar percentage (16.8%) of subjects participated from Gadarpur and Kicha blocks. 16.7 percent of subjects belonged to Jaspur, followed by Sitarganj (16.5%) and Rudrapur (16.1%).

As far as class is concerned maximum percentage (18.4%) of respondents were from class 8^{th}. The respondents participation from 7^{th} and 8^{th} class was almost equal i.e. 16.6 percent. 16.4 percent of respondents participated from class 10^{th} followed by class 12^{th} (16.3%) and 9^{th} (15.7%).

More than half (51%) of the respondents were females while 49 percent were males. Table further presents the religion of the respondents who participated in the study. Maximum (56.5%) respondents were Hindus followed by Muslims (42.8%) and Punjabis (0.78). Majority of the respondents (75.3%) belonged to single/Nuclear family while rest (24.7%) belonged to joint family.

More than half of the respondents (51.2%) were of 14 years or less than that while 48.8 percent were above 14 years of age. A small percentage of respondents (21.1%) had family income more than Rs. 8000. Maximum percentage (28%) of subjects had income between 3000 to 8000. 25.6 per cent had family income less than 1500 while 25.3 percent had family income between 1500 to 3000.

Further probing into the table, data reflects the father's and mother's education of the subjects. Less than half (41.9%) of the fathers were educated upto 6th to intermediate level while in case of mothers more than half (59.8%) of the mothers were uneducated. About 35 percent of fathers were uneducated. Fewer percentages of fathers were educated upto Graduation (1.8%), followed by ITI (0.1%) and MBA (0.1%). In case of mothers B.A. was done by only 2.6 percent of mothers whereas 25 percent were educated upto Intermediate.

Further data regarding occupation revealed that majority (63.5%) of the fathers worked as laborer whereas 89.4percent of mothers were housewives. 13.3 percent of fathers had farming as main occupation followed by Business (11.1%) and service (10.4%). A small percentage (1.7%) of fathers was found to be unemployed. Among mothers after being housewives majority of women (9.6%) had labour as main occupation followed by farming (0.7%), business (0.2%) and service (0.1%).

Thus, in Nutshell it can be concluded that majority of the respondents were from Kashipur Block. Maximum percentage of respondents was in class 8th with age of 14 years or less than that. The percentage of female respondents was more in comparison to their counterparts. Majority of the respondents were Hindus by their religion and were living in nuclear families with family income of around 3000 to 8000. As far as education and occupation is concerned, majority of the fathers were educated upto intermediate while maximum number of mothers were found to be uneducated. Most of the fathers had labour as their main occupation while on the other hand women were homemakers.

SECTION 2: OVERALL KNOWLEDGE OF RESPONDENTS ON VARIOUS SELECTED COMPONENTS OF LIFE SKILL EDUCATION

Table 4.2: Overall knowledge of respondents on various selected components of life skill education

Sl. No.	Components of study	Level of Knowledge of Respondents			Total f (%)
		Proof f (%)	Average f (%)	Good f (%)	
1.	Knowledge on nutrition and reproductive health	2109 (50)	1663 (39)	458 (11)	4230 (100)
2.	Knowledge on personal, environmental and food related cleanliness	1392 (32.9)	1576 (37.25)	1262 (29.83)	4230 (100)
3.	Knowledge on girl's personal hygiene	1904 (88.19)	-	255 (11.81)	2159 (100)

4.	Knowledge on HIV AIDS	3239 (76.57)	-	991 (23.42)	4230 (100)
5.	Knowledge on drug use and misuse	464 (65.3)	180 (25.3)	67 (9.4)	4230 (100)
6.	Knowledge and views on child marriage	1411 (33.36)	1726 (40.78)	1093 (25.88)	4230 (100)
7.	Knowledge on gender imbalances	Gender stereotypical view	Moderate view	Liberal view	4230 (100)
		2404 (58)	1656 (40)	52 (1)	
8.	Knowledge on need and importance of career counselling	Very important	Important	Unimportant	4230 (100)
		274 (65.8)	96 (23.0)	47 (11.2)	
9.	Knowledge on leadership skills	Low	Average	High	4230 (100
		136 (3.21)	2715 (64.18)	1379 (32.60)	

To assess the need of life skill education for adolescents need of life skill education scale was developed on different components of life skills and data was analyzed by using descriptive statistics (frequencies and percentages) and Chi-sq - X^2 test. The table 4.2 depicts overall picture of respondent's knowledge on different components of life skill education. A total of 4230 students were studied, of whom 50 percent respondents had poor knowledge, 39 percent respondents had average knowledge and only 11 percent had good knowledge regarding nutrition and reproductive health. When we talk about knowledge on personal, environmental and food related cleanliness/ hygiene and sanitation. It was found that approximately one third of studied respondents had poor knowledge regarding personal, environmental and food related cleanliness whereas others had good to average level of knowledge. After accessing data on knowledge about maintaining personal hygiene it was found that Majority of the studied adolescent girls (88.19 %) had poor knowledge regarding menstrual hygiene and only 11.81 % girls had good knowledge.

It can also be concluded from the above table that most of the surveyed respondents (76.57 %) had poor knowledge regarding HIV AIDS rest 23.42 % of them had good knowledge. It was evident that 65.3 percent respondents had poor knowledge, 25.3 percent respondents had average knowledge and only 9.4 percent had good knowledge regarding drug use and misuse. When respondents were asked to give their views on child marriage it was observed from the above table that 33.36 % respondent had poor knowledge regarding child marriage, 40 % had average knowledge and 25.88 % respondents had good knowledge.

Above table also represents that out of 4230 respondents more than half (58%) had gender stereotypical views whereas 40 percent scored moderately on gender stereotype scale. Very few respondents had liberal score on gender stereotype scale. The overall score depicts the conservative mindset of respondents. From the entire surveyed respondents 65.8 % considered career counseling is very important, 23 percent considered it important and only 11.2 percent considered it unimportant.

The obtained data in Table 4.10 presents the association between demographic variable and leadership skills. From all the surveyed respondents more than 60 percent had average level of leadership skills and more than 30 percent possess good leadership skills. Very little percentage of respondents had poor leadership skills.

SECTION 3: KNOWLEDGE ON NUTRITION AND REPRODUCTIVE HEALTH

WHO (World Health Organization) suggested Adolescents physical reproductive health (ARH) and life skills education (LSE) for the physical and emotional well-being of adolescents. ARH and LSE enhance their ability to be healthy and remain free from too-early or unwanted pregnancy, unsafe abortion, sexually transmitted diseases (STDs) including HIV/AIDS, and sexual violence and coercion, sexual assault, rape and prostitution, malnutrition, unsafe abortion. Life skills are behaviors that enable individuals to adapt to and deal effectively with the demands and challenges of life.

UN report mentioned that one in every five persons on the earth is an adolescent aged between 10-19 years, and 85% of these adolescents live in developing countries. An estimated 1.7 million adolescents die every year mainly from accidents, violence, pregnancy related problems or illnesses that are either preventable or treatable. As per study, the majority has no idea about the changes associated with puberty (e.g., menstruation or wet dreams) until they experience them, though the strong family structure plays a major role in the lives of adolescents but it fails to respond to their needs for reproductive health information. An estimated 1.7 million adolescents die every year mainly from accidents, violence, pregnancy related problems or illnesses that are either preventable or treatable. The best investment in and education and health sector should go to this segment of population to shape the future of mankind. Knowing the importance of awareness and education in this area need assessment survey was planned to know the present knowledge of adolescents and need of education and training in this area so LSE can

be planned for adolescents. In carrying out this study, questionnaire was administered to respondents (students) in their various schools to collect relevant data. The data collected from the respondents were analyzed, interpreted and presented below.

Table 4.3: Association between demographic variables and knowledge on nutrition and reproductive health

Variables		**Poor f (%)**	**Average f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total Respondents	**N=4230 (100)**	2109 (50)	1663 (39)	458 (11)	189.8	0.001 (S)
Block	Gadarpur	331 (46.6)	314 (44.2)	66 (9.2)		
	Jaspur	414 (58.6)	218 (30.8)	75 (10.6)		
	Kashipur	228 (31.6)	364 (50.4)	130 (18.0)		
	Kichha	414 (58.5)	241 (34.1)	52 (7.4)		
	Rudrapur	315 (46.1)	306 (44.9)	62 (9.0)		
	Sitarganj	407 (58.1)	220 (31.4)	73 (10.5)		
Class	7th	360 (51.2)	291 (41.4)	52 (7.4)	198.32	(S)
	8th	466 (59.7)	271 (34.8)	43 (5.5)		
	9th	412 (62.4)	204 (31.0)	44 (6.6)		
	10th	319 (46.1)	288 (41.6)	85 (12.3)		
	11th	236 (33.6)	341 (48.5)	126 (17.9)		
	12th	316 (45.7)	268 (38.7)	108 (15.6)		
Gender	Female	700 (32.4)	1041 (48.2)	419 (19.4)	656.6	0.001 (S)
	Male	1409 (68.0)	623 (30.0)	39 (2.0)		
Age	Less than or equal to14 years	1181 (54.5)	818 (37.8)	167 (7.7)	61.9	0.001 (S)
	Greater than	928	845	291		

	14 years	(45.0)	(41.0)	(14.0)		
Income	Less than 1500	385 (41.6)	434 (47.0)	105 (11.4)	92.9	0.001 (S)
	1501-3000	525 (57.5)	287 (31.4)	101 (11.1)		
	3001 to 8000	543 (53.9)	384 (38.1)	81 (8.0)		
	More than 8001	358 (46.9)	271 (35.5)	134 (17.6)		
Religion	Hindu	1120 (46.8)	959 (40.1)	311 (13.1)	84.7	0.001 (S)
	Muslim	989 (54.7)	672 (37.2)	146 (8.1)		
	Punjabi	15 (45.45)	15 (45.45)	3 (9.09)		
Fathers Education	Graduation	38 (59.4)	16 (25.0)	10 (15.6)	115.90	0.001 (S)
	ITI	0 (0.0)	0 (0.0)	3 (100.0)		
	MBA	0 (0.0)	4 (100.0)	0 (0.0)		
	Master	16 (34.1)	22 (46.8)	9 (19.1)		
	Primary	332 (47.4)	300 (42.8)	69 (9.8)		
	Six to Intermediate	667 (45.2)	573 (38.8)	235 (16.0)		
	Uneducated	681 (55.1)	480 (38.8)	75 (6.1)		
Mothers Education	BA	32 (36.4)	16 (18.1)	40 (45.5)	160.7	0.001 (S)
	Primary	204 (46.8)	197 (45.2)	35 (8.0)		
	Uneducated	1052 (50.9)	845 (40.9)	168 (8.2)		
	Six to Intermediate	391 (45.4)	324 (37.6)	147 (17.0)		
Type of Family	Joint	484 (46.3)	436 (41.7)	126 (12.0)	7.4	0.02 (S)
	Single/Nuclear	1625 (51.0)	1227 (38.5)	332 (10.5)		
Fathers Occupation	Business	263 (55.7)	141 (29.9)	68 (14.4)	68.11	0.001 (S)
	Farmer	279 (49.6)	205 (36.5)	78 (13.9)		
	Labour	1279	1152	253		

		(47.6)	(43.0)	(9.4)		
	Service	252 (57.4)	129 (29.4)	58 (13.2)		
	Unemployed	46 (49.3)	26 (49.3)	1 (1.4)		
Mothers Occupation	Business	5 (55.55)	2 (22.2)	2 (22.2)	32.2	0.001 (S)
	Farmer	15 (50.0)	12 (40.0)	3 (10.0)		
	Housewife	1888 (50.0)	1465 (38.7)	428 (11.3)		
	Labour	254 (62.8)	124 (30.6)	26 (6.4)		
	Service	3 (50.0)	2 (33.33)	1 (16.66)		

A total of 4230 students were studied, of whom 50 percent respondents had poor knowledge, 39 percent respondents had average knowledge and only 11 percent had good knowledge regarding nutrition and reproductive health. A study conducted on Wolaita Sodo University students supports the present research findings which says, that the level of knowledge of students about reproductive and sexual rights was found to be low. The study suggests that Ministry of Education has to incorporate reproductive and sexual rights in the curricula of high schools and institutions of higher learning otherwise reproductive health targeted Millennium Development Goals will not be achieved without improving access to reproductive health. This study was aimed to assess knowledge of reproductive and sexual rights as well as associated factors among adolescents (Adinew et.al, 2013). In another study which was conducted in Cairo city says that status of adolescent's health was improved after getting intervention. There is a statistically significant improvement between pre-test and post-test results regarding nutrition, personal hygiene, exercise, follow-up, sleep, and reproductive health. Continuous health educational program was recommended by using suitable strategies (Rasmia & Ebtisam, 2015). When we correlate the results of above two studies with the present study conducted in Udham singh nagar, we can conclude that nutrition and reproductive health knowledge of almost more than fifty percent of adolescents residing in developing countries are deficient. Suitable intervention and follow up programme in the form of life skill training is recommended for school going adolescents to improve their knowledge and health conditions.

The data presented in table 4.3 presents association between demographic variables and knowledge on nutrition and reproductive health. The table reflects that majority of the respondents (18.0%) from Kashipur block had good knowledge about nutrition and reproductive health followed by respondents from Jaspur (10.6%), Sitarganj (10.5%). More than half of the respondents from Jaspur (58.6%), Kichha (58.5%) and Sitarganj (58.1%) were found to have poor knowledge regarding this aspect. The result was found to be statistically significant ($p<0.001$). Therefore, it can be concluded that locale has association with the knowledge level of nutritional and reproductive health.

A study conducted in slums of Chennai coincides with the present findings which also found that adolescent girls living in slums are vulnerable to poor reproductive health due to lack of awareness about reproductive health and low life skills. These girls are in a crucial stage of their life cycle and their health can impact the health of future generations. Despite adolescents comprising almost one-quarter of the Indian population they are ill served in terms of reproductive health. There is a high prevalence of menstrual/reproductive morbidity, self-treated abortion and low knowledge about modes of HIV transmission/prevention and use of contraceptives among adolescent girls in slums in Chennai (Sharanya, 2014). After assessing the findings of present study and supporting studies we can conclude that there is an urgent need to initiate community-level life skill education, sex education and behaviour change communications to improve the health conditions of adolescents.

As far as class is concerned it was found by the study that maximum percentage of subjects who were in class 11^{th} (17.9%), followed by class 12^{th} (15.6%) and 10^{th} (12.3%) were found to have better knowledge in comparison to junior class subjects which is quiet obvious. More than half (62.4%) of the subjects studying in class 9^{th} were found to have poor level of knowledge followed by those studying in class 8^{th} (59.7%) and 7^{th} (51.2%). It was found that as class increases respondents level of knowledge on the particular aspect also increases. Statistically, the difference was found to be significant inferring that class has association with knowledge level. The reason of increase in the knowledge level of higher class students regarding the topic can be the availability of the study material in the course curricula.

To assess the knowledge regarding reproductive health among women and the associated socio-demographic factors total 345 women of age group 15-44 years were selected from 28 villages. Data on knowledge of reproductive health were collected by using a modified interview schedule. Results of the study indicated that out of 345 study population; only 19% had adequate

knowledge on reproductive health. The proportion of women who had adequate knowledge in each domain was marriage and pregnancy (47.5%), menstruation (29.9%), contraception (17.4%) and reproductive tract infections (15%). So we can conclude from the above study that knowledge regarding reproductive health was inadequate among women in reproductive age group in rural areas (Jose et.al, 2019).

Further probing into the above table it was found that majority of the females had good (19.4%) to average (48.2%) level of knowledge compared to their counterpart i.e. 2.0 percent and 30.0 percent boys fall in good and average level knowledge category respectively. But when we see the overall picture it was found that a very large percentage of women and men had poor knowledge regarding nutrition and reproductive health issues. Statistically the difference was found to be significant.

Further, age related data depicts that with age the knowledge level increase as majority of the children with age more than 14 years fall in the category of good (14.0%) or average (41.0%) level of knowledge category. The difference was found to be highly significant.

The maximum percentages (17.6%) of respondents with family income more than 8000 were found to have good level of knowledge. The respondents from low income families showed poor level of knowledge. Statistically, the result was found to be significant.

Religion wise among Hindus 13.1 percent were found to have good level of knowledge whereas 46.8 percent were found to have poor level of knowledge. 40.1 percent were found to have average level of knowledge. Among Muslims 54.7 were found to have poor level of knowledge followed by 37.2 percent as average and 8.1 percent as good knowledge level. Among Punjabi respondents, 45.45 percent were found to have average knowledge while 45.45 percent had good knowledge regarding nutrition and reproductive health and 9.09 percent Punjabi respondent were in poor knowledge category. The difference was found to be statistically significant ($p<0.001$).

When we talk about father's education it was found that Irrespective of education mostly fathers had poor knowledge regarding reproductive health and nutrition. The subjects whose fathers were educated upto Graduation or post graduation showed some what good to average level of knowledge compared to others. Majority of subjects (100%) whose fathers had done ITI showed good knowledge level similarly 100% subjects were found to have average knowledge level whose fathers have done MBA though the numbers of such respondents were very low. More than half (55.1%) of the respondents had poor knowledge level whose fathers were

uneducated. The difference was found to be statistically significant represents education of father impacts the knowledge level of their kids.

Further probing into mothers' education, it was found that half of the respondents (50.9%) whose mothers were uneducated showed poor to average (40.9) knowledge level whereas 45.5 percent of respondents whose mothers were educated showed good knowledge level. Statistically, the result was found to be highly significant.

The respondents (12.0%) who lived in joint family showed good knowledge level in comparison to those who live in single/nuclear family (10.5%). 41.7 percent and 38.5 percent of respondents who live in joint family and nuclear family respectively had average level of knowledge. More than half (51.0%) of the respondents depicted poor knowledge level who lived in nuclear family. The difference was found to be significant at 0.05 level of significance.

Approximately 50 percent of the respondents, irrespective of their parent's education had poor knowledge regarding reproductive health and nutrition. Only 14.4 percent of respondents showed good knowledge level followed by 13.9 percent and 13.2 percent whose father were businessman, farmer and service class respectively. Small percentage of respondents (1.4%) showed good knowledge level even after father being unemployed while rest of the respondents showed average knowledge level regarding the issue. The difference was found to be statistically significant.

Further, it was found that approximately more than 50 percent of the respondents, irrespective of their mother's occupation had poor level of knowledge regarding reproductive health and nutrition. It was also very surprising to note that good percentage of respondents had average level of knowledge 22.2 percent, 40.0, percent 38.7 percent, 30.6 percent and 33.33 percent whose mothers were in Business, Farming, Housewives, Labors and in service respectively. Statistically, the difference was found to be highly significant.

Thus, It is pertinent from the table that locale, type of family, class of children, gender, age, family income, religion, parents education and occupation has significant association with the nutritional and reproductive health related knowledge.

Many studies also supports the above research findings which says that poor reproductive health is due to lack of knowledge, lack of access and lack of availability of services. In rural areas knowledge regarding menstrual hygiene practices and sexually transmitted diseases are very poor (Manjula et.al, 2012 & Bobhate & Shrivastava 2011). Regular health education regarding menstruation, menstrual hygiene, family planning methods, reproductive tract

infections to women of the reproductive age group improves the maternal and child health. Study also found that reproductive health depends on economic status, education, employment and the living conditions. So, the empowerment of women through education is very important for a good sexual and reproductive health (Jain & Anand 2016).

SECTION 4: KNOWLEDGE ON PERSONAL, ENVIRONMENTAL AND FOOD RELATED HYGIENE AND CLEANLINESS

The word Hygiene has evolved from the Greek term "Hygeia" which means "Goddess of Health". Hygiene can be defined as, "The science and art which is associated with the preservation and promotion of health", Keshav (2008).

Personal, environmental and food related hygiene and cleanliness includes different habits i.e., keeping our body clean like washing hands and brushing teeth, handling cooked and uncooked food hygienically and keeping our surrounding clean, which keep bacteria, viruses and fungal far away from us. Good personal, environmental and food related hygiene and cleanliness will help an individual to keep feeling good about their self. Since those individuals who do not maintain their personal environmental and food related hygiene and cleanliness i.e., they wear dirty clothes, have body odor and bad breath, live in dirty place and consume unhealthy food will suffer from discrimination and infectious diseases. This wills mainly lead to psychological and health complications. But the most important point in this subject is that all people have their own hygiene but some people do it better than others, this mainly depends on each person's culture, society and family norm, Rasool (2012).

Maintaining Good personal, environmental and food related cleanliness among school going adolescents could be effective towards preventing infectious diseases. By Maintaining proper hygiene and cleanliness among individuals and communities can reduce threats especially by communicable diseases, thereby improving the overall health of a community. Based on population health analysis Winslow CEA (1920), Sixty-two percent and 31% of all deaths in Africa and Southeast Asia, respectively, are caused by infectious disease Curtis VA (2009). This trend is especially notable in developing countries where acute respiratory and intestinal infections are the primary causes of morbidity and mortality among young children WHO (2009)

An adolescent holds vast amount of liveliness, positive energy and resources for their country, and wish to be revered upon, appreciated and accepted accordingly. They need this unlimited energy, vitality and idealism, for fulfilling a robust urge to experiment and explore in order to make a better world. The world is currently having one among the biggest reservoirs of youth population i.e. 1.8 billion out of the full population compared to past decades (UNFPA, 2014). There are seventeen developing countries within the world whose half the population age is a smaller than eighteen years. Republic of India is home to quite 243 million people aged between 10-19 years that accounts for 2 hundredth of the entire population of the country. Despite 35% of the world population being in the 10–24 age groups, the personal, environmental and food related hygiene and cleanliness knowledge of adolescents have neither been researched nor addressed adequately. There are very few studies on knowledge, attitude and practice of adolescents in relation to their personal, environmental and food related hygiene and cleanliness. To improve the knowledge of adolescents on these issues it is important to plan "age-appropriate" interventions to address their diverse needs. Keeping these issues in mind present study was planned to know the adolescent's present knowledge on personal, environmental and food related hygiene and cleanliness and plan suitable intervention programme accordingly.

Table 4.4: Association between demographic variables and Personal, environmental and food related cleanliness

Variables		**Poor f (%)**	**Average f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total Respondents	N=4230 (100)	1,392 (32.9)	1,576 (37.25)	1,262 (29.83)		
Block	Gadarpur	194 (27.3)	262 (36.8)	255 (35.9)	102.05	0.001 (S)
	Jaspur	281 (39.7)	265 (37.5)	161 (22.7)		
	Kashipur	198 (27.4)	268 (37.1)	256 (35.5)		
	Kichha	267 (37.7)	261 (37.0)	179 (25.3)		
	Rudrapur	181 (26.5)	249 (36.5)	253 (37.0)		
	Sitarganj	271 (38.7)	271 (38.7)	158 (22.6)		
Class	7th	245 (35.4)	281 (40.6)	166 (24.0)	98.4	0.001 (S)
	8th	239 (36.2)	251 (38.0)	170 (25.8)		

	9th	299 (38.3)	274 (35.2)	207 (26.5)		
	10th	228 (33.0)	266 (38.4)	198 (28.6)		
	11th	234 (33.3)	246 (35.0)	223 (31.7)		
	12th	147 (20.9)	258 (36.7)	298 (42.4)		
Gender	Female	417 (19.3)	831 (38.5)	911 (42.2)	475.2	0.001 (S)
	Male	975 (47.0)	745 (36.0)	351 (17.0)		
Age	Less than or equal to14 years	758 (35.0)	792 (36.6)	616 (28.4)	9.34	0.009 (S)
	Greater than 14 years	634 (30.7)	784 (38.0)	646 (31.3)		
Income	Less than 1500	289 (37.8)	274 (36.0)	200 (26.2)	61.2	0.001 (S)
	1501-3000	366 (40.1)	315 (34.5)	232 (25.4)		
	3001 to 8000	339 (33.6)	384 (38.1)	285 (28.3)		
	More than 8001	234 (25.3)	350 (37.9)	340 (36.8)		
Religion	Hindu	756 (31.6)	847 (35.4)	787 (33.0)	41.7	0.001 (S)
	Muslim	634 (35.1)	706 (39.1)	467 (25.8)		
	Punjabi	2 (6.1)	23 (69.7)	8 (24.2)		
Fathers Education	Graduation	19 (29.7)	29 (45.3)	16 (25.0)	63.4	0.001 (S)
	ITI	1 (33.3)	2 (66.7)	0 (0.0)		
	MBA	0 (0.0)	0 (0.0)	4 (100.0)		
	Master	8 (17.0)	14 (29.8)	25 (53.2)		
	Primary	246 (35.1)	198 (28.2)	257 (36.7)		
	Six to Intermediate	452 (30.6)	575 (39.0)	448 (30.4)		
	Uneducated	516 (41.7)	386 (31.2)	334 (27.1)		
Mothers Education	BA	20 (22.73)	28 (31.82)	40 (45.45)	10.9	0.09 (NS)

	Primary	155 (35.6)	147 (33.7)	134 (30.7)		
	Uneducated	829 (40.1)	622 (30.1)	614 (32.2)		
	Six to Intermediate	298 (34.6)	308 (35.73)	256 (29.69)		
Type of Family	Joint	361 (34.5)	399 (38.1)	286 (27.4)	4.2	0.11 (NS)
	Single/Nuclear	1031 (32.4)	1177 (37.0)	976 (30.6)		
Fathers Occupation	Business	158 (33.5)	190 (40.2)	124 (26.3)	42.3	0.001 (S)
	Farmer	179 (31.8)	230 (41.0)	153 (27.2)		
	Labour	854 (31.8)	978 (36.4)	852 (31.8)		
	Service	98 (22.3)	157 (35.8)	184 (41.9)		
	Unemployed	35 (48.0)	21 (28.7)	17 (23.3)		
Mothers Occupation	Business	2 (22.22)	4 (44.44)	3 (33.33)	45.2	0.001 (S)
	Farmer	10 (33.33)	6 (20.0)	14 (47.67)		
	Housewife	1252 (33.1)	1436 (38.0)	1093 (28.9)		
	Labour	164 (40.59)	120 (29.70)	120 (29.70)		
	Service	2 (33.3)	2 (33.3)	2 (33.4)		

The data furnished in the table 4.4 reflects association between demographic variables and knowledge of personal, environmental and food related cleanliness/ hygiene and sanitation. A total of 4,230 students studying in 7 to 12 standard were studied of whom 2,159 were girls and 2,071 respondents were boys. In the present study it was found that approximately one third of studied respondents had poor knowledge regarding personal, environmental and food related cleanliness whereas others had good to average level of knowledge regarding the present topic. It was found that girls had more knowledge regarding personal, environmental and food related cleanliness compared to boys.

While reviewing the available literature on the present topic it is evident that study conducted by other researchers also correlates with present study. The study conducted by

Redmond & Griffith 2003; Sanlier 2009; Tomaszewska et al. 2018 found that most of the subjects indicate inadequate knowledge and practice about food safety and health and hygiene. In this study, the knowledge and practice of the adolescents were studied both in total and regarding three areas include 1) Personal and Environmental Food Hygiene (PEH), 2) Food Preparation and Preservation (FPP), and 3) Food Consumption (FC). Accordingly, the results of the study showed that the level of adolescents' knowledge in two areas of FPP and PEH was better than of FC. The food consumption practice was also weaker in two other areas. Findings of other studies indicated that food consumers had poor knowledge and practice in relation to food safety.

The data revealed that maximum percentage of respondents from Rudrapur (37.0%) and Gadarpur (35.9%) had good personal, environmental and food related hygiene knowledge whereas the maximum percentage of respondents from Jaspur (39.7%) and Sitarganj (38.7%) was found to have poor level of knowledge. The difference was found to be highly significant ($p<0.001$).

The respondents studying in higher classes 12^{th} (42.4%) and 11^{th} (31.7%) were found to have good knowledge about hygiene and sanitation compared to respondents studying in lower grades such as class 7^{th} (35.4%) 8th (36.2%) and 9^{th} (38.3%). They were found to have poor knowledge level. The difference was found to be statistically significant. So it is evident from the study that level of knowledge increases with age.

The females (80.7%) were found to be more aware about hygiene and sanitation in total in comparison to males (53.0%). The difference was found to be highly significant ($p<0.001$). Similar trend was observed age-wise. The respondents who were above 14 years (69.3%) were found to be more aware in comparison to those whose age was less than 14 years (65.0%). Statistically, the result was found to be significant. So it can be concluded from the above study that females were more aware about maintaining personal, environmental, and food related hygiene and cleanliness compared to boys.

It is very overwhelming to note that 36.8 percent of respondents who had family income more than 8000 were found to be more aware about personal, environmental and food related cleanliness in comparison those with lower family income. The results were statistically significant. So we can say that families, were overall family income is good maintain good hygiene and sanitation practices compared to the families living with low family income. And the reason of good family income was involvement of both parents in the work force. The reason of their involvement in work force is their educational status. So hear it can be seen that directly

or indirectly education and knowledge is responsible for maintaining good hygiene and sanitation practices among individuals.

As far as religion is concerned majority of the Punjabi respondents (93.9%) were found to be more aware about hygiene and sanitation followed by Hindu (68.4%) and Muslim respondents (64.9%). The results were found to be statistically significant.

All the respondents (100%) whose fathers have done MBA were found to have good personal, environmental and food related cleanliness knowledge followed by those respondents (53.2%) whose fathers have done post-graduation. The maximum percentage of respondents (35.1%) whose fathers were uneducated (41.7%) and educated upto primary reflected poor knowledge level. The result was found to be statistically significant at 0.001 level of significance. Maximum percentage of respondents (45.45%) whose mothers were educated upto graduation had better knowledge level compared to respondents of uneducated mothers (32.2%). Statically, also no significant difference was observed.

In type of family, respondents belonging to nuclear family (30.6%) were found to have better knowledge in comparison to those who live in joint family (27.4%). However, no statistical difference was found.

About 48.0 percent of respondents whose fathers were unemployed were found to have poor knowledge, followed by respondents whose fathers worked as labour (31.8%) and farmer (31.8%). However, among respondents whose mothers were labour (40.59%) had poor knowledge about hygiene and sanitation, followed by mothers working as farmer (33.33%) and service class (33.4%). The maximum percentage of respondents (41.9%) whose fathers were service class had good personal, environmental and food related cleanliness knowledge followed by respondents whose fathers were worked as labour (33.5%). Maximum percentage of respondents whose mothers were involved in service (33.33) and business (33.33%) had good knowledge about hygiene and sanitation.

When we correlate the present research findings with the similar research studies it was found that socioeconomic factors seem to play a crucial role in the knowledge and practices of adolescents in the field of food safety and hygiene. The results of the study conducted by Unusan 2005; Tomaszewska 2018; Jianu & Chiş 2012; Avarand & Abedi-Sarvestani 2015; Sharifirad & Hidarnia 2001, represents that adolescents' knowledge regarding food safety was significantly affected by their educational status (Studying or have graduated), parents' educational level, parents' job status and household economic conditions. So that, the results

indicated the higher knowledge of adolescents with higher educated parents and graduated adolescents. Additionally, adolescents with employed parents and also adolescents with good household economic status significantly had more knowledge about food safety and hygiene. This study finding correlates with the findings of the present study. However, the role of socioeconomic factors was more limited in adolescents practice in relation to food safety and hygiene. So that, only the mother's job status and family economic status had a significant effect on the practice. Accordingly, the well-being of the family and stay-at-home mothers had a positive and significant influence on the practice of the adolescents in relation to food safety and hygiene. Therefore, in several studies, the effect of socioeconomic factors on the knowledge and practice of adolescents in relation to food safety has been reported. Generally, it can be said that the higher education level of adolescents and their parents has a positive effect on food safety-related knowledge (Jianu & Chiş 2012; Avarand & Abedi-Sarvestani 2015; Sharifirad & Hidarnia 2001), although it does not guarantee a proper practice (Ansari-Lari et al. 2010). However, the job statuses of the parents and the household's economic situation have a positive impact on the knowledge as well as improving the practice of adolescents in relation to food safety (Avarand & Abedi-Sarvestani 2015).

Thus, the data pertaining to knowledge about personal, environmental and food related hygiene reveals that locale, class, gender, age, family income, religion, father's education, occupation and mother's occupation has significant association with the personal hygiene knowledge level of an individual. However, mother education and type of family was found to have no association with hygiene and sanitation knowledge level.

SECTION 5 KNOWLEDGE ON GIRL'S PERSONAL HYGIENE

Adolescence has been recognized as a special period that requires specific attention as it marks the onset of menarche, an important milestone, and hence good hygienic practices during menstruation are crucial to maintain a healthy life. This study was planned to assess knowledge, beliefs, and source of information regarding menstruation, and also to assess hygiene among them so that life skill training programme can be planned for adolescent girls in this area.

Table 4.5: Association between demographic variables and knowledge on Girls' personal Hygiene

Variables		**Poor f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total respondents' f (%)	**N=2159 (100)**	1904 (88.19)	255 (11.81)		
Block	Gadarpur	317 (86.6)	49 (13.4)	3.1	0.6 (NS)
	Jaspur	312 (88.4)	41 (11.6)		
	Kashipur	337 (90.6)	35 (9.4)		
	Kichha	316 (87.8)	44 (12.2)		
	Rudrapur	312 (87.6)	44 (12.4)		
	Sitarganj	310 (88.0)	42 (12.0)		
Age	Less than or equal to14 years	1007 (89.6)	117 (10.4)	4.4	0.03 (S)
	Greater than 14 years	897 (86.6)	138 (13.4)		
Income	Less than 1500	553 (87.4)	80 (12.6)	2.9	0.4 (NS)
	1501-3000	438 (87.6)	62 (12.4)		
	3001 to 8000	416 (89.8)	47 (10.2)		
	More than 8001	276	45		
		(85.9)	(14.1)		
Religion	Hindu	1069 (86.2)	170 (13.8)	25.6	0.001 (S)
	Muslim	813 (91.5)	75 (8.5)		
	Punjabi	22 (68.7)	10 (31.3)		
Fathers Education	Graduation	31 (77.5)	9 (22.5)	29.5	0.001 (S)
	ITI	1 (33.3)	2 (66.7)		
	MBA	4 (100.0)	0 (0.0)		
	Master	28 (68.3)	13 (31.7)		

	Primary	399 (88.3)	53 (11.7)		
	Six to Intermediate	706 (88.9)	88 (11.1)		
	Uneducated	457 (89.1)	56 (10.9)		
Mothers Education	BA	46 (77.9)	13 (22.1)	32.7	0.001 (S)
	Primary	212 (90.9)	21 (9.1)		
	Uneducated	911 (88.2)	121 (11.8)		
	Six to Intermediate	458 (89.1)	56 (10.9)		
Type of Family	Joint	430 (86.0)	70 (14.0)	2.9	0.08 (NS)
	Single/Nuclear	1474 (88.8)	185 (11.2)		
Fathers Occupation	Business	219 (87.2)	32 (12.8)	6.3	0.17 (NS)
	Farmer	218 (84.8)	39 (15.2)		
	Labour	1262 (88.4)	165 (11.6)		
	Service	176 (90.8)	18 (9.2)		
	Unemployed	29 (96.6)	1 (3.4)		
Mothers Occupation	Farmer	17 (94.4)	1 (5.6)	3.4	0.32 (NS)
	Housewife	1718 (88.2)	231 (11.8)		
	Labour	168 (88.4)	22 (11.6)		
	Service	1 (50.0)	1 (50.0)		

In the present study Girls knowledge on personal hygiene and its association with demographic variable was studied and presented in Table 4.5. Majority of the studied adolescent girls (88.19 %) had poor knowledge regarding menstrual hygiene and only 11.81 % girls had good knowledge. The girls' respondents from Gadarpur (13.4%), Rudrapur (12.4%) and Kichha (12.2%) were found to have good knowledge regarding personal hygiene whereas majority of the girl respondents from Kashipur (90.6%), Jaspur (88.4%) and Sitarganj (88.0%) were found to have poor knowledge level. Statistically, this difference was found to be non-significant.

Therefore, locale of the respondents does not bring any difference in the knowledge level of girls regarding personal hygiene. Similarly, girl's knowledge regarding personal hygiene was not found to be associated with income of the family and type of family.

Comparatively, a low percentage of respondents (13.4%) whose age was more than 14 years were found to have good knowledge level whereas majority of the respondents (89.6%) whose age was less than 14 years of age were found to have poor knowledge level. Statistically, the difference was found to be significant at 0.05 level of significance. Maximum percentage of girl respondents (31.3%) who belonged to Punjabi families was found to have good personal hygiene knowledge followed by respondents from Hindu families (13.8%). The majority of the girls (91.5%) belonging to Muslim families were found to have poor knowledge level. The difference was found to be statistically significant.

Further probing into the parental education and its association with girls personal hygiene knowledge it was found that all the fathers (100%) who were educated upto MBA their daughters were found to have poor personal hygiene knowledge on the other hand majority of the girls (90.9%) whose mothers were educated upto primary level was found to have poor knowledge level. Further, maximum percentage of girls whose fathers were either uneducated (89.1%) or educated upto intermediate level (88.9%) were found to have poor knowledge level regarding personal hygiene. More than sixty percent of the girls (66.7%), followed by 31.7% and 22.5% of the girls whose fathers had done ITI, Masters and Graduation respectively were found to have good knowledge level whereas maximum percentage of the girls (22.1%) whose mothers were educated upto B.A. were found to have good knowledge level. The difference was found to be statistically significant.

Data related to parental occupation depicts that majority of the girls whose fathers were unemployed (96.6%), service class (90.8%) or working as labour (88.4%) were found to have poor knowledge level while comparatively low percentage of respondents whose fathers were either engaged in farming (15.2%) or running their own business (12.8%) were found to have good knowledge level. About 94.4 percent of the girls whose mothers were engaged in farming were found to have poor knowledge level followed by those respondents whose mothers were working as labour (88.4%) and Housewife (88.2%). Around fifty percent of the respondents whose mothers were occupied in services were found to have good knowledge level. However, no significant association was found statistically.

Therefore, it can be summed that age, religion, father and mother education has significant association with girls' personal hygiene knowledge whereas locale, income, type of family and occupation of father and mother was found to have no significant association with knowledge of girls regarding personal hygiene.

It is very obvious from the above study and the study conducted by Deshpandey et al. in 2018 revealed that menstrual hygiene was unsatisfactory among adolescent girls. This was because of low level of education and improper assumptions about the phenomenon of menstruation. Hence, it is very crucial to educate girls about the physiological facts of menstruation, wipe off false taboos, and lead them to proper hygienic practices to safeguard themselves against reproductive tract infections. Various schools, Anganwadi health centers, social welfare foundations, and nongovernment organizations should stand to disseminate awareness about menstrual hygiene, pattern, and problems. In the study of Deshpandey et al.,, it was clearly found that knowledgeable parents play a vital role in implementing hygienic practices among adolescent girls. It is a strong belief that an educated woman is a first teacher of a family, which is why education of the mother and the adolescent girl is very important. But presently, as we live in a male-dominated society, educating men about basic needs of women of his family during menstruation will help in contributing toward cleaner and healthier menstrual practices.

Table 4.5a: Association between demographic variables and experience during first menstruation

Variables		**Experience during first menstruation**				
		Common, starts with a certain period in all girls f (%)	**Curse from God f (%)**	**Disease f (%)**	**Chi^2**	**p-value**
Total respondents'f(%)	**N=2159 (100)**	1606 74.39	254 (12)	299 (13.85)		
Block	Gadarpur	277 (75.7)	40 (10.9)	49 (13.4)	11.8	0.2 (NS)
	Jaspur	266 (75.4)	41 (11.6)	46 (13.0)		

	Kashipur	253 (68.0)	55 (14.8)	64 (17.2)		
	Kichha	278 (77.2)	40 (11.1)	42 (11.7)		
	Rudrapur	269 (75.6)	42 (11.8)	45 (12.6)		
	Sitarganj	263 (74.7)	36 (10.2)	53 (15.1)		
Religion	Hindu	905 (73.0)	153 (12.4)	181 (14.6)	5.3	0.2 (NS)
	Muslim	674 (75.9)	97 (10.9)	117 (13.2)		
	Punjabi	27 (84.4)	4 (12.5)	1 (3.1)		
Fathers Education	Graduation	35 (87.5)	2 (5.0)	3 (7.5)	66.6	0.001 (S)
	ITI	3 (100.0)	0 (0.0)	0 (0.0)		
	MBA	4 (100.0)	0 (0.0)	0 (0.0)		
	Master	19 (46.4)	11 (26.8)	11 (26.8)		
	Primary	317 (70.1)	52 (11.5)	83 (18.4)		
	Six to Intermediate	639 (80.5)	74 (9.3)	81 (10.2)		
	Uneducated	346 (67.4)	88 (17.2)	79 (15.4)		
Mothers Education	BA	49 (83.0)	4 (6.8)	6 (10.2)	12.7	0.1 (NS)
	Primary	183 (78.5)	28 (12.0)	22 (9.5)		
	Uneducated	744 (72.1)	122 (11.8)	166 (16.1)		
	Six to Intermediate	382 (74.3)	64 (12.5)	68 (13.2)		
Type of Family	Joint	399 (79.8)	40 (8.0)	61 (12.2)	11.6	0.003 (S)
	Single/Nuclear	1207	214	238		

		(72.8)	(12.9)	(14.3)		
Fathers Occupation	Business	162 (64.5)	39 (15.6)	50 (19.9)	24.1	0.002 (S)
	Farmer	207 (80.5)	22 (8.6)	28 (10.9)		
	Labour	1072 (75.1)	161 (11.3)	194 (13.6)		
	Service	147 (75.8)	25 (12.9)	22 (11.3)		
	Unemployed	18 (60.0)	7 (23.3)	5 (16.7)		
Mothers Occupation	Farmer	9 (50.0)	6 (33.3)	3 (16.7)	46.5	0.001 (S)
	Housewife	1477 (75.8)	208 (10.7)	264 (13.5)		
	Labour	123 (64.8)	36 (18.9)	31 (16.3)		
	Service	2 (100)	0 (0)	0 (0)		
Age	Less than or equal to14 years	799 (71.1)	145 (12.9)	180 (16.0)	13.9	0.001 (S)
	Greater than 14 years	807 (78.0)	109 (10.5)	119 (11.5)		
Income	Less than 1500	494 (78.0)	58 (9.2)	81 (12.8)	58.01	0.001 (S)
	1501-3000	330 (66.0)	96 (19.2)	74 (14.8)		
	3001 to 8000	327 (70.6)	56 (12.1)	80 (17.3)		
	More than 8001	274 (85.4)	24 (7.5)	23 (7.1)		

Menstruation is a significant biological change among girls when they attain puberty. There are several practices prevalent in our society related to this change. It is evident from the above table that most of the respondents (approximately75%) were aware about what is menstruation during their first menstruation. Most of them said that it is common and it stars with certain period in all girls. Whereas only 12 -13 percent of girls said that they were not aware about menstruation during their first menstruation and they thought that it is curse from God or

they got infected by some dangerous disease. So it can be concluded that mostly girls were aware about menstruation before getting menstruated.

But the study conducted by Paria et.al, in 2014 found that 37.52% of girls were aware of menstruation before menarche of which 44.72% were urban and 30.07% were rural. In the study conducted by Deo *et al*., it was reported that 42.5% rural and 55.4% urban girls were aware about menstruation prior to attainment of menarche. Findings of this study almost corroborating the findings of the study was done by Dasgupta *et al*., 32.5% and Subhas *et al*. 36.95%. Similar study conducted in Nagpur by Patle *et al*. found that 63.38% girls in urban area were aware of menstruation before menarche as compared to 47.57% girls in rural area.

The data in Table 4.5a further reflects the association between demographic variables and experience during first menstruation. As per the gathered data, no significant association was found between experience during first menstruation and respondent's locale and religion.

As far as parental education is concerned all the respondents (100.0%) whose fathers had done ITI and MBA experienced their first menstruation as a common biological changes that starts with a certain period in all girls. Majority of the respondents (87.5%) whose fathers had done graduation or educated upto 6^{th} to intermediate had the same experience. Equal percentage of respondents (26.8%) whose fathers were educated upto masters considered it a curse from God or disease. About 18.4% of the respondents whose fathers were educated upto primary level felt it like a disease whereas 17.2% of the respondents whose fathers were uneducated considered it a curse from God during their first menstruation. The difference was found to be statistically significant however it is very suprising to note that statistically mother education was found to be non-significantly associated with experience during first menstruation.

The majority of the respondents (79.8%) who belonged to Joint families found this change as natural which starts in everyone at certain age. Less percentage of respondents who belonged to nuclear families considered it as a disease (14.3%) followed by curse from God (12.9%). Statistically, the difference was found to be significant.

Data related to parental occupation depicts that majority of the respondents whose fathers were engaged as farmers (80.5%) followed by services (75.8%) experienced it as a natural biological process. It is a curse from God is felt maximum percentage of those respondents

whose fathers were either unemployed (23.3%) or running their own business (15.6%). Likewise around 19.9% and 16.7% of the respondents whose fathers were running their own business and unemployed respectively referred it as a disease during their first menstruation. Majority of the respondents whose mothers were house wives (75.8%) and labour (64.8%) experienced that it is common and starts with a certain period in all girls. Fifty percent of the respondents whose mothers were doing farming and services considered it a curse from God or disease. Comparatively small percentage of respondents whose mothers were engaged as labour (18.9%) considered it a curse from God while 16.7% of respondents whose mothers were doing farming considered it as a disease. The difference was found to be statistically significant.

The data related to age of the respondents reflects that majority of the respondents (78.0%) whose age was more than 14 years experienced it as a natural biological process which starts at certain age whereas those respondents whose age was less than 14 years consider it a disease (16.0%) followed by curse from God (12.9%). Statistically, age was found to be statistically associated with experience during menstruation. Further family income of the respondents reveals that majority of the respondents whose family income was less than 1500 (78.0%) or more than 8000 (85.4%) experienced their first menstruation as a common change which occurs in girls after certain age. The maximum percentage of respondents whose family income was between 1500 to 3000 considered it curse from God (19.2%) followed by disease (14.8%) while the respondents whose family income was between 3000 to 8000 considered it a disease (17.3%) followed by curse from God (12.1%). The difference was found to be statistically significant.

Therefore, it can be concluded that Father's education, type of family, parental occupation, age and income was found to have significant association with experience during first menstruation while on the other hand locale, religion, mother education, was not significantly associated with experience during first menstruation.

Talking openly about biological changes, reproductive process etc. is still not prevalent in our society. Menstruation is the biological change which occurs at certain age in girls. It is very necessary that they should have proper information about this. Therefore, who provides them this information is very important.

Table 4.5 b: Association between demographic variables and medium of information about menstruation

Variables		Medium of information about menstruation								
		Mother f (%)	Friends in school f (%)	Books f (%)	Television f (%)	Relatives f (%)	Elder Sister f (%)	News paper	Chi^2	p-value
Total no of respondents f (%)	N=2159 (100)	1286 (59.5)	350(16.2)	309(4.12)	89 (4.21)	27(1.25)	592(27.42)	39(2.73)		
Block	Gadarpur	212 (57.9)	61 (16.7)	68 (18.6)	6 (1.6)	4 (1.1)	11 (3.0)	4 (1.1)	1.29	0.001 (S)
	Jaspur	217 (61.5)	56 (15.9)	46 (13.0)	23 (6.5)	1 (0.3)	8 (2.3)	2 (0.5)		
	Kashipur	221 (59.4)	46 (12.4)	37 (9.9)	20 (5.4)	14 (3.8)	15 (4.0)	19 (5.1)		
	Kichha	212 (58.9)	63 (17.5)	66 (18.3)	6 (1.7)	3 (0.8)	7 (1.9)	3 (0.9)		
	Rudrapur	203 (57.0)	65 (18.3)	65 (18.3)	5 (1.4)	3 (.8)	9 (2.5)	6 (1.7)		
	Sitarganj	221 (62.8)	59 (16.8)	27 (7.7)	29 (8.2)	2 (0.5)	9 (2.6)	5 (1.4)		
Religion	Hindu	782 (63.1)	151 (12.2)	151 (12.2)	68 (5.5)	18 (1.5)	45 (3.6)	24 (1.9)	72.3	0.001 (S)
	Muslim	488 (55.0)	188 (21.2)	153 (17.2)	21 (2.4)	9 (1.0)	14 (1.5)	15 (1.7)		
	Punjabi	16 (50.0)	11 (34.4)	5 (15.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		
Fathers Education	Graduation	34 (85.0)	1 (2.5)	5 (12.5)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1.09	0.001 (S)
	ITI	2 (66.7)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (33.3)		
	MBA	0 (0.0)	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		
	Master	32 (78.0)	0 (0.0)	4 (9.8)	3 (7.3)	0 (0.0)	0 (0.0)	2 (4.9)		
	Primary	252 (55.8)	80 (17.7)	68 (15.0)	19 (4.2)	4 (0.9)	20 (4.4)	9 (2.0)		
	Six to Intermediate	503 (63.4)	112 (14.1)	108 (13.6)	30 (3.8)	12 (1.5)	12 (1.5)	17 (2.1)		
	Uneducated	282 (55.0)	108 (21.1)	69 (13.5)	26 (5.1)	8 (1.6)	11 (2.1)	9 (1.6)		
Mothers Education	BA	43 (72.9)	5 (8.5)	5 (8.5)	4 (6.7)	1 (1.7)	0 (0.0)	1 (1.7)	71.1	0.001 (S)
	Primary	175 (75.1)	34 (14.6)	11 (4.7)	1 (0.5)	0 (0.0)	7 (3.0)	5 (2.1)		
	Uneducated	558 (54.1)	183 (17.7)	174 (16.8)	45 (4.4)	15 (1.5)	35 (3.4)	22 (2.1)		
	Six to Intermediate	320 (62.2)	77 (15.0)	69 (13.4)	22 (4.3)	10 (1.9)	7 (1.4)	9 (1.8)		
Type of Family	Joint	305 (61.0)	74 (14.8)	52 (10.4)	28 (5.6)	13 (2.6)	20 (4.0)	8 (1.6)	24.8	0.001 (S)
	Single/Nuclear	981 (59.1)	276 (16.6)	257 (15.5)	61 (3.7)	14 (0.8)	39 (2.4)	31 (1.9)		
	Business	143	47	28	16	5	5	7	94.1	0.00

		(57.0)	(18.7)	(11.1)	(6.4)	(2.0)	(2.0)	(2.8)	6	1 (S)
Fathers Occupation	Farmer	178 (69.3)	19 (7.4)	23 (8.9)	23 (8.9)	3 (1.2)	7 (2.7)	4 (1.6)		
	Labour	831 (58.3)	254 (17.8)	226 (15.8)	46 (3.2)	13 (0.9)	30 (2.1)	27 (1.9)		
	Service	116 (59.8)	24 (12.4)	29 (14.9)	4 (2.1)	4 (2.1)	16 (8.2)	1 (0.5)		
	Unemployed	18 (60.0)	6 (20.0)	3 (10.0)	0 (0.0)	2 (6.7)	1 (3.3)	0 (0.0)		
Mothers Occupation	Farmer	11 (61.1)	2 (11.1)	2 (11.1)	0 (0.0)	2 (11.1)	0 (0.0)	1 (5.6)	27.9	0.06 (NS)
	Housewife	1155 (59.2)	327 (16.8)	272 (14.0)	84 (4.3)	21 (1.1)	54 (2.8)	36 (1.8)		
	Labour	118 (62.1)	21 (11.1)	35 (18.4)	5 (2.6)	4 (2.1)	5 (2.6)	2 (1.1)		
	Service	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)		
Age	Less than or equal to14 years	641 (57.0)	212 (18.9)	164 (14.6)	59 (5.2)	8 (0.7)	25 (2.2)	15 (1.4)	30.5	0.001 (S)
	Greater than 14 years	645 (62.3)	138 (13.3)	145 (14.0)	30 (2.9)	19 (1.9)	34 (3.3)	24 (2.3)		
Income	Less than 1500	343 (54.2)	125 (19.7)	92 (14.5)	17 (2.7)	10 (1.6)	27 (4.3)	19 (3.0)	57.0	0.001 (S)
	1501-3000	276 (55.2)	98 (19.6)	73 (14.6)	34 (6.8)	3 (0.6)	10 (2.0)	6 (1.2)		
	3001 to 8000	291 (62.9)	56 (12.1)	81 (17.5)	15 (3.2)	5 (1.1)	7 (1.5)	8 (1.7)		
	More than 8001	206 (64.2)	38 (11.8)	44 (13.7)	11 (3.4)	5 (1.6)	13 (4.0)	4 (1.3)		

The data reflected in Table 4.5b demonstrates the association between demographic variables and medium of information about menstruation. From all the surveyed respondents more than 50 percent receive menstruation related information from their mothers, followed by elder sisters (27.42%), and friends in school (16.21). rest of respondents received menstruation related information from books, magazines, television, newspaper etc. More than half of the respondents from Sitarganj (62.8%) and Jaspur (61.5%) reported that they received information from their mothers regarding menstruation. Almost equal percentage of respondents from Gadarpur (18.6%), Kichha (18.3%) and Rudrapur (18.3%) mentioned that they received menstruation knowledge from their friends. School was the medium of information for 18.3% and 17.5% of the respondents from Rudrapur and Kichha respectively. Respondents reported that they receive information while talking with their friends. Less percentage of respondents from Sitarganj (8.2%) and Jaspur (6.5%) stated that they receive menstruation information from television. 5.1%, 4.0% and 3.8% of the respondents from Kashipur reported that they gained the information about the menstruation from newspaper, books and relatives respectively. The difference was found to be significant.

More than half of the respondents who belonged to Hindu (63.1%) and Muslim (55.0%) families reported that they obtained menstrual information from their mothers. 34.4% and 21.2% of the respondents from Punjabi and Muslim families respectively stated their source of information was friends in school. Likewise, 17.2% of the respondents from Muslim families and 15.6% of the respondents from Punjabi families stated that main source of menstruation related information for them was books, magazines etc. Television as a medium of information was mentioned by 5.5% and 2.4% of the respondents who belonged to Hindu and Muslim families respectively. 1.5%, 1.9% and 3.6% of the respondents from Hindu families told that they received information from relatives, newspaper and books respectively. The difference was found to be statistically significant.

As far as parental education is concerned, all the respondents (100.0%) whose fathers had done MBA reported that books and magazines were the main source of menstruation related information for them. Majority of the respondents whose father's education was upto graduation (85.0%) and masters (78.0%) mentioned that they gained information from their mothers. 33.3% of the respondents whose fathers had done ITI revealed that they learned about menstruation from newspaper. 21.1% and 17.7% of the respondents whose fathers were uneducated and educated upto primary level respectively came to know about menstruation from their schools. Television, book and relatives were the source of information for those respondents whose fathers were educated upto masters (7.3%), primary level (4.4%) and don't have any education (1.6%). Mothers were the source of information for 75.1% and 72.9% of those respondents whose mothers were educated upto primary and BA respectively. Friends and school as the source of information were referred by 17.7% and 15.0% of the respondents whose mothers were uneducated and educated upto six to intermediate respectively. 16.8% respondents of uneducated mothers mentioned that books and magazines were the source of information for them. Television as a medium of information was described by 6.7% of the respondents whose mothers were educated upto BA. 1.9% of children whose mothers were educated upto six to intermediate quoted that relatives provide them information about menstruation. 3.4% children of uneducated mothers and equal percentage of respondents i.e. 2.1% respondents whose mothers were uneducated or educated upto primary level specified that they came to know about menstruation from books and newspaper respectively. The difference was found to be statistically significant.

Majority of the respondents (61.0%) who belonged to joint families credited their mothers for informing them about menstruation. 16.6%. 15.5% and 1.9% of the respondents who belonged to nuclear family stated that they learned about menstruation from school, elder sister and newspaper respectively. 5.6%, 2.6% and 4.0% of the respondents who belonged to joint families mentioned that they gained information about menstruation from television, relatives and books respectively. Statistically, the difference was found to be highly significant.

Majority of the respondents (69.3%) whose fathers occupation was farming stated that they learned about menstruation from their mothers followed by those respondents whose fathers were unemployed (60.0%) or engaged in services (59.8%). 20.0% of the respondents whose fathers were unemployed revealed that their friends provide them information related to menstruation followed by 18.7% of the respondents whose occupation was business. Books and magazines were the source of information for 15.8% and 14.9% of the respondents whose fathers were working as labour and service respectively. Television was credited as a source of information by 8.9% and 6.4% of the respondents whose fathers' occupation was farming and business respectively. Almost equal percentage of respondents whose fathers were engaged in services (2.1%) or running their own business (2.0%) described that they came to know about menstruation from their relatives. Books and newspaper was the source of information for 8.2% of the respondents whose father's occupation was service and 2.8% of the respondents whose fathers were running their own business respectively. The difference was found to be significant however the mother occupation was not found to be significantly associated with medium of information.

Majority of the respondents (62.3%) with age was more than 14 years stated that their mothers provided them information about menstruation. 18.9%, 14.6% and 5.2% of the respondents whose age was less than 14 years gained menstruation related information from their friends, elder sister and television respectively. Books, newspaper and relatives were the source of information for 3.3%, 2.3% and 1.9% of the respondents respectively with age was more than 14 years. The difference was found to be statistically significant.

Majority of the respondents (64.2%) whose income was more than 8000 followed by those respondents whose income was between 3000 to 8000 (62.9%) credited their mothers for providing them knowledge regarding menstruation. An almost equal percentage of respondents whose income was less than 1500 (19.7%) or between 1500 to 3000 (19.6%) referred their

friends as their medium of information. Books and magazines was the source of information for 17.5% of the respondents whose income was between 3 000 to 8000. 6.8% of the respondents whose income was between 1500 to 3000 acknowledged the role of television for proving them information. An equal percentage of respondents i.e. 1.6% whose income was less than 1500 or more than 8000 mentioned that they came to know about menstruation from their relatives. 4.3% and 3.0% of the respondents whose income was less than 1500 mentioned that they learned about menstruation from books and newspaper respectively. The difference was found to be significant statistically.

In nutshell, it can be inferred from the table that only mother occupation was not found to be significantly associated with medium of information about menstruation while all other demographic variables were found to be significantly associated with medium of information.

Many studies support the above findings which found that only 24% girls were aware of the term menstruation before menarche. Mother was the first informant in 84% cases (Deshpandey et al. 2018). This is expected as mothers are usually the closest confidant teacher of most of the growing adolescent girls in our environment. Whereas in a study conducted by Dudeja et al. 56.4% girls were aware of the process of menstruation before menarche and 60.7% girls revealed mother as their source of information while 31.8% declared that they obtained information from their friends (Dudeja et al.). Other sources of information were sisters, friends, and relatives. A study in Ethiopia reported teacher to be the first source of information in 43.1% of girls (Gultie et al.2014).

Table 4.5c: Association between demographic variables and sanitary measures taken during menstruation

Variables		**Sanitary products used during menstruation**				
		Sanitary pads f (%)	Cotton and cloth f (%)	Only Cloth f (%)	Chi^2	p-value
Total no of respondents f (%)	**N=2159 (100)**	1494 (69.19)	295 (13.66)	370 (17.13)		
Block	Gadarpur	255 (69.7)	42 (11.5)	69 (18.8)	11.4	0.32 (NS)
	Jaspur	236 (66.9)	61 (17.3)	56 (15.8)		
	Kashipur	251 (67.5)	52 (14.0)	69 (18.5)		
	Kichha	254	44	62		

		(70.6)	(12.2)	(17.2)		
	Rudrapur	251 (70.5)	41 (11.5)	64 (18.0)		
	Sitarganj	247 (70.2)	55 (15.6)	50 (14.2)		
Religion	Hindu	874 (70.5)	144 (11.6)	221 (17.9)	19.1	0.001 (S)
	Muslim	592 (66.7)	151 (17.0)	145 (16.3)		
	Punjabi	28 (87.5)	0 (0.0)	4 (12.5)		
Fathers Education	Graduation	34 (85.0)	3 (7.5)	3 (7.5)	46.4	0.001 (S)
	ITI	2 (66.7)	0 (0.0)	1 (33.3)		
	MBA	4 (100.0)	0 (0.0)	0 (0.0)		
	Master	29 (70.7)	5 (12.2)	7 (17.1)		
	Primary	298 (65.9)	62 (13.7)	92 (20.4)		
	Six to Intermediate	601 (75.7)	89 (11.2)	104 (13.1)		
	Uneducated	318 (62.0)	98 (19.1)	97 (18.9)		
Mothers Education	BA	182 (78.2)	22 (9.4)	29 (12.4)	38.4	0.001 (S)
	Primary	31 (52.5)	10 (17.0)	18 (30.5)		
	Uneducated	669 (64.8)	173 (16.8)	190 (18.4)		
	Six to Intermediate	376 (73.1)	61 (11.9)	77 (15.0)		
Type of Family	Joint	365 (73.0)	71 (14.2)	64 (12.8)	8.6	0.01 (S)
	Single/Nuclear	1129 (68.1)	224 (13.5)	306 (18.4)		
Fathers Occupation	Business	989 (69.3)	188 (13.2)	250 (17.5)	5.43	0.71 (NS)
	Farmer	183 (71.2)	33 (12.8)	41 (16.0)		
	Labour	133 (68.6)	32 (16.5)	29 (14.9)		
	Service	21 (70.0)	2 (6.7)	7 (23.3)		
	Unemployed	168 (66.9)	40 (15.9)	43 (17.2)		

Mothers Occupation	Farmer	12 (66.7)	3 (16.7)	3 (16.7)	24.29	0.001 (S)
	Housewife	1365 (70.0)	272 (14.0)	312 (16.0)		
	Labour	120 (63.2)	19 (10.0)	51 (26.8)		
	Service	2 (100.0)	0 (0.0)	0 (0.0)		
Age	Less than or equal to14 years	726 (64.6)	184 (16.4)	214 (19.0)	24.7	0.001 (S)
	Greater than 14 years	768 (74.2)	111 (10.7)	156 (15.1)		
Income	Less than 1500	452 (71.4)	78 (12.3)	103 (16.3)	60.6	0.001 (S)
	1501-3000	296 (59.2)	90 (18.0)	114 (22.8)		
	3001 to 8000	338 (73.0)	41 (8.9)	84 (18.1)		
	More than 8001	266 (82.9)	22 (6.9)	33 (10.2)		

It is very clear from the above table that from overall surveyed respondents approximately 70 uses sanitary pads available in the market. Only 13.66 and 17.13 percent respondents use cotton and cloth and only cloth respectively. It means they maintain good hygiene during menstruation and this may be due to easily and cheaply available sanitary pads in the market.

Unhygienic and improper practices during this period can lead to serious reproductive tract infections, urinary tract infections, and various sexually transmitted diseases. It can also contribute to developing life-threatening conditions such as cervical cancer. A study which was conducted in urban slum also found that about 60% of the girls used sanitary pad, whereas 19% used old cotton cloth (Deshpande, et.al, in 2018). Similarly, in a study in Delhi, 63.3% of the girls used sanitary pads, whereas cloth was used by 25.3%. The practice of using pads was found less than that reported from a study by Patavegar et al. in which 85.92% used sanitary pads (Patavegar et.al,2014). Many of the girls preferred cloth pieces and the usual practice was washing the cloth pieces and then drying them in the sun in a private area so that nobody can see them (Gultie & Hailu, 2014). In a study conducted among girls in Kenya, cotton wool, plastic

bags, mattresses, dried leaves, cow dung, and paper from school classrooms were used (Jewitt & Ryley, 2014).

Different types of products are used during menstruation ranging from simple cloth, cotton to expensive sanitary pads available in the market. The data presented in Table 4.4c illustrates the association between demographic variables and sanitary measures taken during menstruation. The data related to different blocks in which the respondents resides shows no significant association with what is used during menstruation.

As per the religion, majority of the respondents (87.5%) who belonged to Punjabi families used sanitary pads followed by respondents from Hindu families (70.5%) and Muslim families (66.7%). Cotton and cloth were used by 17.0% of the respondents from Muslim families followed by Hindu families (11.6%). Only cloth is used by 17.9% and 16.3% of the respondents who belonged to Hindu and Muslim families respectively. The difference was found to be statistically significant.

Data pertaining to parental education reveals that sanitary pads were preferred by most of the respondents irrespective of their fathers and mothers education. But above table also depicts that fathers and mothers who are more educated their daughters use sanitary pads during menstruation much frequently compared to uneducated or less educated parents. Which shows that father's and mother's education indirectly influences their daughter to maintain good menstrual hygiene. All the respondents whose fathers had done MBA, 85.0% and 75.7% of the respondents whose father had done Graduation and intermediate respectively preferred sanitary pads. 19.1% of the respondents whose fathers were uneducated preferred cotton and cloth followed by those respondents whose fathers were educated upto primary level (13.7%). 33.3% and 20.4% of the respondents whose fathers had education upto primary respectively use only cloth during menstruation.

As far as mother education is concerned, majority of the respondents preferred sanitary pads during menstruation whose mothers had done graduation (78.2%) followed by those respondents whose mothers were educated upto six to intermediate (73.1%). Around 30.5% and 17.0% of the respondents whose mothers were educated upto primary used only cloth and cotton & cloth respectively during menstruation. A small percentage of respondents whose mothers

were uneducated preferred only cloth followed by cotton and cloth during menstruation i.e. 18.4% and 16.8% respectively. The difference was found to be highly significant.

Majority of the respondents (73.0%) who belonged to joint family had preference for sanitary pads during menstruation followed by cotton and cloth (14.2%). Only cloth was used by 18.4% of the respondents who belonged to nuclear family. The difference was found to be statistically significant.

Fathers' occupation was not found to be associated with what is used during menstruation. As far as mother education is concerned, all the respondents (100%) whose mothers were doing service utilize sanitary pads followed by those respondents whose mothers were housewives (70.0%). The mothers who were engaged in farming their 16.7% of the children stated that they use only cloth while 16.7% acknowledged the use of cotton and cloth. Only cloth is used mostly by those respondents whose mothers were working as labour (26.8%). Statistically, the difference was found to be significant.

Majority of the respondent (74.2%) whose age was greater than 14 years used sanitary pads. 19.0% and 16.4% of the respondents whose age was less than 14 years utilize only cloth followed by cotton and cloth respectively. The difference was found to be significant. So we can say as age increases girls become more aware about sanitary hygiene and they start using sanitary pads during menstruation.

Further the data related to family income reveal that majority of the respondents (82.9%) whose family income was more than 8000 preferred sanitary pads followed by 73.0% of the respondents whose family income was between 3000 to 8000. Cotton & cloth is utilized by 18.0% of the respondents whose family income is between 1500 to 3000. About 22.8% and 18.1% of the respondents whose family income was between 1500 to 3000 and 3000 to 8000 respectively preferred only cloth. The difference was found to be significant. So it is very clear that family income also play a major in maintaining menstrual hygiene because it can be concluded from the above table that where family income is good sanitary pads were more frequently used by the female members of that family during menstruation.

Overall picture which the table presents is that locale and father occupation was not found to have any association with sanitary measures taken during menstruation while on the other hand, religion, parental occupation, type of family, mother occupation, age and income was

found to have association with sanitary measures taken during menstruation i.e. they somehow influence the preference.

Table 4.5d: Association between demographic variables and frequency of changing sanitary pads or cloth during menstruation

Variables		**After every 3 hours f (%)**	**After every 4 hours f (%)**	**After 5 hours f (%)**	**Chi^2**	**p-value**
Total no of respondents f(%)	**N=2159 (100)**	625 28.94	939 43.49	595 27.55		
Block	Gadarpur	104 (28.5)	159 (43.5)	102 (28.0)	8.01	0.99 (NS)
	Jaspur	101 (28.6)	153 (43.3)	99 (28.1)		
	Kashipur	102 (27.5)	170 (45.7)	100 (26.8)		
	Kichha	106 (29.4)	156 (43.3)	98 (27.2)		
	Rudrapur	99 (27.8)	156 (43.8)	101 (28.4)		
	Sitarganj	113 (32.1)	145 (41.2)	94 (26.7)		
Religion	Hindu	353 (28.5)	503 (40.6)	383 (30.9)	51.5	0.001 (S)
	Muslim	267 (30.1)	411 (46.3)	209 (23.6)		
	Punjabi	5 (15.6)	25 (78.2)	2 (6.2)		
Fathers Education	Graduation	6 (15.0)	17 (42.5)	17 (42.5)	71.25	0.001 (S)
	ITI	0 (0.0)	2 (66.7)	1 (33.3)		
	MBA	4 (100.0)	0 (0.0)	0 (0.0)		
	Master	14 (34.1)	17 (41.5)	10 (24.4)		
	Primary	133 (29.4)	193 (42.7)	126 (27.8)		
	Six to Intermediate	256 (32.2)	344 (43.3)	194 (24.5)		
	Uneducated	129 (25.1)	253 (49.3)	130 (25.3)		
Mothers Education	BA	23 (39.0)	29 (49.2)	7 (11.8)	45.7	0.001 (S)
	Primary	153 (29.8)	211 (41.0)	159 (29.2)		
	Uneducated	337	438	256		

		(32.7)	(42.4)	(24.9)		
	Six to Intermediate	77 (33.0)	116 (49.8)	40 (17.2)		
Type of Family	Joint	131 (26.2)	228 (45.6)	141 (28.2)	14.1	0.007 (S)
	Single/Nuclear	494 (29.8)	711 (42.9)	453 (27.3)		
Fathers Occupation	Business	79 (31.5)	127 (50.6)	45 (17.9)	1.57	0.001 (S)
	Farmer	71 (27.6)	122 (47.5)	56 (24.9)		
	Labour	405 (28.3)	432 (30.3)	589 (41.4)		
	Service	42 (21.6)	86 (44.4)	66 (34.0)		
	Unemployed	1 (3.4)	14 (46.6)	15 (50.0)		
Mothers Occupation	Farmer	4 (22.2)	7 (38.9)	7 (38.9)	30.14	0.003 (S)
	Housewife	582 (29.9)	853 (43.8)	513 (26.3)		
	Labour	38 (20.0)	78 (41.1)	74 (38.9)		
	Service	1 (50.0)	1 (50.0)	0 (0.0)		
Age	Less than or equal to14 years	344 (30.6)	466 (41.5)	314 (27.9)	5.9	0.20 (NS)
	Greater than 14 years	281 (27.1)	473 (45.8)	280 (27.1)		
Income	Less than 1500	139 (22.0)	160 (25.2)	334 (52.8)	76.3	0.001 (S)
	1501-3000	168 (33.7)	169 (33.8)	162 (32.5)		
	3001 to 8000	165 (35.6)	195 (42.1)	103 (30.4)		
	More than 8001	73 (22.8)	159 (49.5)	89 (27.7)		

Frequency of changing sanitary pads or cloth during menstruation is reflected in Table 4.5(d). Statistically, no significant association was found between location and frequency of changing sanitary pad or cloth.

Majority of the respondents (78.2%) from Punjabi families reported that they change pad after every 3 hours followed by 46.3% of the respondents from Muslim families. Within 1 hour, the pad is changed by 30.1% and 28.5% of the respondents from Muslim and Hindu families

respectively. Around 30.3% and 21.2% of the respondents from Hindu and Muslim families respectively stated that they change pads after every 5 hours. Only 2.4% of the respondents specified other frequency for changing napkins. The difference was found to be significant.

All the respondents (100%) whose fathers were educated upto MBA reported that they change pads in 1 hour followed by 34.1% of the respondents whose father had done masters. Napkins are changed after every 3 hours by 66.7% of the respondents whose fathers had done ITI followed by 49.3% of the respondents whose fathers were uneducated. About 42.5% and 33.3% of the respondents whose fathers had done Graduation and ITI respectively change sanitary napkins after every 5 hours. A very small percentage of respondents i.e. 2.5% and 2.4% whose fathers were uneducated and educated upto primary level respectively explained other frequency of changing napkins. With respect to mothers' education, Most of the respondents fell in the category who sad that they change pads after every four hours. It was also found that mostly daughters of those mothers who were educated upto graduation or intermediate reported that they change pads after every 3 or 4 hours compared to daughters of less educated or uneducated mothers.49.8% and 49.2% of the respondents whose mothers were educated upto and BA and intermediate respectively reported that they change napkins after every 4 hours. Likewise 24.9.0% and 29.2 of the respondents whose mothers were uneducated and only educated upto primary stated that they change napkins after every 5 hours. The difference was found to be statistically significant.

The data was more or less same for both joint and nuclear family. Maximum percentage of respondents (45.6%) who lived in joint families specified that their frequency of changing napkins is after every 4 hours whereas 29.85 of the respondents from nuclear families specified that they change napkins within 3 hour. Around 27.3% of the respondents from nuclear family specified that after 5 hours they change napkins. Statistically, the difference was found to be significant.

Almost equal percentage of respondents whose fathers were involved in their own business (50.6%) followed by farming (47.5%) stated that they change napkin after every 4 hours. Frequency of changing napkins after 3 hour is mentioned by 31.5% and 27.6.% of the respondents whose father's occupation was business and farming. Mostly Respondents whose fathers' were unemployed (50.0 percent) and labors (41.4%) stated that they change napkin after every 5 hours. In case of mother's occupation, fifty percent of the respondents whose mother's

occupation was service mentioned that they change napkin after every 3 hour or 4 hour. The maximum percentage of girls (43.8%) whose mother were housewives specified that they change napkins after every 4 hours while 29.9% stated that they change within 3 hour. Frequency of changing pads after 5 hours was specified by 38.9% of the respondents whose mother's was labors and farmers respectively. The difference was found to be significant.

Age-wise no significant difference was found. Further family income related data represents that more than half of the respondents (52.8%) whose income was less than 1500 quoted that their frequency of changing napkin is after every 5 hours. whereas approximately half of them (49.5 percent) said that they change pad after every four hours. This represents that as income increases frequency of changing pads also increases. The difference was found to be significant

Overall from the tables it can be inferred that religion, type of family, income parental education and occupation was found to be associated with frequency of changing napkins i.e. demographic variables somehow influence the frequency of changing napkins.

Table 4.5e: Association between demographic variables and means of disposal of sanitary pads/cloth

Variables		**Means of disposal of sanitary pads/cloth**					
		Throwing it in open litter after wrapping in paper f (%)	**Throwing it in closed litter after wrapping in paper f (%)**	**Throwing it in toilets f (%)**	**Throwing it in river or ponds f (%)**	**Chi^2**	**p-value**
Total no of respondents f(%)	**N=2159 (100)**	240 11.11	1583 73.32	205 9.49	131 6.06		
Block	Gadarpur	38 (10.4)	276 (75.4)	42 (11.5)	10 (2.7)	49.04	0.001 (S)
	Jaspur	36 (10.2)	260 (73.7)	27 (7.6)	30 (8.5)		
	Kashipur	49 (13.2)	252 (67.7)	33 (8.9)	38 (10.2)		
	Kichha	41 (11.4)	274 (76.1)	34 (9.4)	11 (3.1)		
	Rudrapur	36 (10.1)	272 (76.4)	39 (11.0)	9 (2.5)		
	Sitarganj	40	249	30	33		

		(11.4)	(70.7)	(8.5)	(9.4)		
Religion	Hindu	151 (12.2)	893 (72.1)	108 (8.7)	87 (7.0)	15.7	0.01 (S)
	Muslim	89 (10.0)	661 (74.4)	96 (10.8)	42 (4.8)		
	Punjabi	0 (0.0)	29 (90.6)	1 (3.1)	2 (6.3)		
Fathers Education	Graduation	5 (12.5)	29 (72.5)	4 (10.0)	2 (5.0)	34.7	0.03 (S)
	ITI	0 (0.0)	2 (66.7)	1 (33.3)	0 (0.0)		
	MBA	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)		
	Master	4 (9.8)	30 (73.2)	7 (17.0)	0 (0.0)		
	Primary	62 (13.7)	309 (68.3)	45 (10.0)	36 (8.0)		
	Six to Intermediate	84 (10.6)	615 (77.5)	56 (7.0)	39 (4.9)		
	Uneducated	49 (9.6)	366 (71.3)	67 (13.1)	31 (6.0)		
Mothers Education	BA	7 (11.8)	45 (76.3)	6 (10.2)	1 (1.7)	20.0	0.06 (NS)
	Primary	35 (15.0)	177 (76.0)	13 (5.6)	8 (3.4)		
	Uneducated	116 (11.2)	733 (71.0)	107 (10.4)	76 (7.4)		
	Six to Intermediate	52 (10.1)	385 (74.9)	52 (10.1)	25 (4.9)		
Type of Family	Joint	51 (10.2)	377 (75.4)	46 (9.2)	26 (5.2)	1.74	0.62 (NS)
	Single/Nuclear	189 (11.4)	1206 (72.7)	159 (9.6)	105 (6.3)		
Fathers Occupation	Business	21 (8.4)	183 (72.9)	28 (11.2)	19 (7.5)	23.6	0.02 (S)
	Farmer	33 (12.8)	193 (75.1)	15 (5.8)	16 (6.3)		
	Labour	166 (11.6)	1051 (73.7)	132 (9.3)	78 (5.4)		
	Service	18 (9.3)	134 (69.1)	29 (14.9)	13 (6.7)		
	Unemployed	2 (6.7)	22 (73.3)	1 (3.3)	5 (16.7)		

Mothers Occupation	Farmer	7 (38.9)	9 (50.0)	0 (0.0)	2 (11.1)	18.22	0.03 (S)
	Housewife	209 (10.7)	1438 (73.8)	186 (9.5)	116 (6.0)		
	Labour	24 (12.6)	134 (70.6)	19 (10.0)	13 (6.8)		
	Service	0 (0.0)	2 (100.0)	0 (0.0)	0 (0.0)		
Age	Less than or equal to14 years	136 (12.1)	775 (69.0)	125 (11.1)	88 (7.8)	26.66	0.00 1 (S)
	Greater than 14 years	104 (10.0)	808 (78.1)	80 (7.7)	43 (4.2)		
Income	Less than 1500	79 (15.8)	310 (62.0)	66 (13.2)	45 (9.0)	56.1	0.00 1 (S)
	1501-3000	52 (11.2)	345 (74.5)	41 (8.9)	25 (5.4)		
	3001 to 8000	64 (10.1)	488 (77.1)	53 (8.4)	28 (4.4)		
	More than 8001	22 (6.9)	268 (83.5)	19 (5.9)	12 (3.7)		

The data associated with means of disposal of sanitary pads/cloth is depicted in Table 4.5e. Majority of the respondents i.e. more than 70% of the respondents from all blocks reported that they throw the sanitary pads/cloth in closed litter after wrapping it in paper. Which is really a good practice and it shows that they have awareness regarding proper disposal of sanitary napkins. Lesser no of respondents admitted that they use other practices for the disposal of sanitary pads. 13.2% of the respondents from Kashipur followed by equal percentage of respondents from Kichha and Sitarganj i.e. 11.4% reported that they throw it in open litter after wrapping it in paper. 11.5% of the respondents from Gadarpur and 11.0% from Rudrapur stated that they throw it in toilets. Sanitary pads/cloth was thrown in river/ponds by 9.4% and 8.5% of the respondents from Sitarganj and Jaspur respectively. The difference was found to be significant.

Majority of the respondents (90.6%) from Punjabi families reported that they throw it in closed litter after wrapping it in paper followed by 74.4% and 72.1% of the respondents from Muslim and Hindu families respectively. 12.2% of the respondents from Hindu families and 10.0% of the respondents from Muslim families stated that they throw it in open litter after

wrapping it in paper. Napkins are thrown in toilets by 10.8% and 8.7% of the respondents from Muslim and Hindu families respectively. Around 7.0% and 6.3% of the respondents from Hindu and Punjabi families respectively informed that they throw the napkins in river/ponds. The difference was found to be significant.

All the respondents (100%) whose fathers had done MBA told that they dispose napkins in close litter after wrapping it in paper followed by 77.5% of the respondents whose fathers were educated upto six to intermediate. Napkins are thrown in toilets was told by 33.3% and 17.0% of the respondents whose fathers had done ITI and masters respectively. The respondents whose fathers were educated upto primary (`13.7%) and Graduation (12.5%) updated that they throw the napkins in open litter after wrapping it in paper. The napkins are thrown in river/ponds was reported by 8.0% and 6.0% of the respondents whose fathers were educated upto primary and had no education respectively. The differences were found to be significant. Very surprisingly Mother's education and type of family was not found to be associated with disposal of napkins.

Parental occupation data reveals that majority of the respondents (75.1%) whose father occupation was farming stated that they dispose napkins in closed litter after wrapping it in paper followed by 73.3% of the respondents whose fathers were unemployed. 16.7% of the respondents whose fathers were unemployed stated that they throw napkins in river/ponds. 14.9% of the respondents whose fathers were service class stated that they threw it in toilets followed by 11.2% of the respondents whose fathers were running their own business. The disposal of napkins in open litter after wrapping it in newspaper is stated by 12.8% and 11.6% of the respondents whose fathers' occupation was farming and labour respectively. All the respondents (100%) whose mothers occupation was service revealed that they throw napkins in closed litter after wrapping it in paper. Maximum percentage of respondents (73.8%) whose mothers were housewives reported the same. Throwing of napkins in open litter after wrapping it in paper was told by 38.9% and 12.6% of the respondents whose mother's occupations was farming and labour respectively. 10.0% of the respondents whose mother's occupation was labour stated that they throw napkins in the toilets. The napkins are disposed in river/ponds by 11.1% of the respondents whose mothers were working as farmer. The difference was found to be statistically significant at 0.05 level of significance.

The minimum percentage of respondents whose age was less than 14 years stated that they dispose napkins in open litter after wrapping it in paper i.e. 12.1% of the respondents. 11.1% and 7.8% of the respondents mentioned that they dispose napkins in toilets and river/ponds respectively. Majority of the respondents (78.1%) with age more than 14 years pointed out that they throw napkins in closed litter after wrapping it in paper. This shows that as age increases knowledge also increases. The difference was found to be highly significant.

Majority of the respondents i.e. 83.5% and 77.1% with income more than 8000 and 3000 to 8000 respectively revealed that they throw napkins in closed litter after wrapping it in paper. The napkins were disposed by throwing it in open litter after wrapping it in paper was practiced by 15.8% and 11.2% of the respondents whose income was between 1500 to 3000 and 3000 to 8000 respectively. The respondents whose income was between 1500 to 3000 mentioned that they dispose their napkins in toilets (8.9.2%) followed by in river/ponds (5.4%). The difference was found to be significant.

Study which was conducted in Karachi discovered that almost all, that is, 97.4% of the participants preferred to dispose their sanitary pad off by throwing it in the bin, for it to be collected by local garbage collectors, as part of the domestic waste disposal system. However, this was somewhat contradicted by the highly significant finding which showed, that several women faced problems in locating a disposal bin for disposing their sanitary pad, in places outside of their homes ($p \leq 0.01$). This is consistent with a study carried out in developing countries, which showed that there was a lack of sanitary facilities, including the lack of disposal bins (Rai et al.2019).

Thus, it can be concluded from the table that locale, religion, father education, parental occupation, age and family income has significant association with means of disposing the napkins however mother education and type of family was not found to be significantly associated with means of disposal of napkins.

SECTION 6: KNOWLEDGE ON HIV AIDS

According to the United Nations International Children's Emergency Fund report, India has been ranked 10^{th} in the list of countries that were most affected with human immunodeficiency virus (HIV) (UNICEF 2011). Several risk factors including commercial sex, casual sex, sexual abuse, and substance abuse are found in this group that makes them vulnerable to HIV (Naswa S, Marfatia, 2010). The risk of HIV in Indian adolescents is

further compounded by their incomplete and inaccurate knowledge about it. In addition, the conservative Indian culture with its social restrictions and norms prevents free and open discussion about HIV/acquired immune deficiency syndrome (AIDS) within family and denies the children and adolescents even the basic information about it. Present study was, therefore, designed to study the knowledge of adolescents regarding HIV AID so training programme can be planned based on their present knowledge. The data collected from the respondents were analyzed, interpreted and presented below.

Table 4.6: Association between demographic variable and HIV knowledge

Variables		**Poor f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total respondents N=4230 (100)		3239 (76.57)	991 (23.42)		
Block	Gadarpur	545 (76.6)	166 (23.4)	20.70	0.001 (S)
	Jaspur	547 (76.6)	160 (23.4)		
	Kashipur	514 (71.2)	208 (28.8)		
	Kichha	573 (81.0)	134 (19.0)		
	Rudrapur	516 (75.5)	167 (24.5)		
	Sitarganj	544 (77.7)	156 (22.3)		
Class	7th	533 (75.8)	170 (24.2)	68.7	0.001 (S)
	8th	644 (82.5)	136 (17.5)		
	9th	562 (85.2)	98 (14.8)		
	10th	498 (72.0)	194 (28.0)		
	11th	502 (71.4)	201 (28.6)		
	12th	500 (72.3)	192 (27.7)		
Gender	Female	1532 (71.0)	627 (29.0)	77.4	0.001 (S)
	Male	1707 (82.4)	364 (17.6)		
Age	Less than or equal to14 years	1711 (78.9)	455 (21.1)	14.5	0.001 (S)

	Greater than 14 years	1528 (74.0)	536 (26.0)		
Income	Less than 1500	715 (77.3)	209 (22.7)	35.5	0.001 (S)
	1501-3000	744 (81.5)	169 (18.5)		
	3001 to 8000	768 (76.2)	240 (23.8)		
	More than 8001	528 (69.2)	235 (30.8)		
Religion	Hindu	1750 (73.2)	640 (26.8)	39.2	0.001 (S)
	Muslim	1457 (80.6)	350 (19.4)		
	Punjabi	32 (96.9)	1 (3.1)		
Fathers Education	Graduation	43 (67.2)	21 (32.8)	15.5	0.01 (S)
	ITI	3 (100.0)	0 (0.0)		
	MBA	4 (100.0)	0 (0.0)		
	Master	39 (83.0)	8 (17.0)		
	Primary	523 (74.6)	178 (25.4)		
	Six to Intermediate	1106 (74.9)	369 (25.1)		
	Uneducated	982 (79.5)	254 (20.5)		
Mothers Education	BA	50 (56.8)	38 (43.2)	32.7	0.001 (S)
	Primary	345 (79.1)	91 (20.9)		
	Uneducated	1635 (79.2)	430 (20.8)		
	Six to Intermediate	634 (73.5)	228 (26.5)		
Type of Family	Joint	801 (76.5)	245 (23.5)	0.00	0.9 (NS)
	Single/Nuclear	2438 (76.5)	746 (23.5)		
Fathers Occupation	Business	381 (80.7)	91 (19.3)	20.9	0.001 (S)
	Farmer	321 (73.1)	118 (26.9)		
	Labour	2071	613		

		(77.1)	(22.9)		
	Service	402 (71.5)	160 (28.5)		
	Unemployed	64 (87.7)	9 (12.3)		
Mothers Occupation	Business	8 (88.9)	1 (11.1)	23.4	0.001 (S)
	Farmer	26 (86.7)	4 (13.3)		
	Housewife	2858 (75.6)	923 (24.4)		
	Labour	344 (85.1)	60 (14.9)		
	Service	3 (50.0)	3 (50.0)		

The data in Table 4.6 mentions about the association between demographic variable and HIV knowledge. It was found from the above table that most of the surveyed respondents (approximately 76.57 %) had poor knowledge regarding HIV AIDS rest 23.42 % respondents had good knowledge. The locale of the study depicts that respondents from Kashipur (28.8%) had good level of knowledge regarding HIV followed by respondents from Rudrapur (24.5%). The equal percentage of respondents (23.4%) from Gadarpur and Jaspur were found to have good knowledge level. On the contrary majority of respondents from Kichha (81.0%) were found to have poor level of knowledge followed by respondents from Sitarganj (77.7%). The difference was found to be statistically significant ($p<0.001$) reflecting that locale impacts the knowledge level of the respondents. A Study conducted to know Indonesian women's knowledge of HIV/AIDS also shows that all socio-demographic characteristics except marital status were related to knowledge of HIV/AIDS among Indonesian women in the univariate analysis ($p<0.05$). Multivariate analysis revealed that only age group, education level, location of residence, and wealth index were related to Indonesian women's knowledge of HIV/AIDS ($p<0.05$) (Pradnyani et.al,2019).

Further, the data regarding class of respondents revels that the respondents who were studying in higher classes like class 12^{th} (27.7%), 11^{th} (28.6%) and 10^{th} (28.0%) were found to have better HIV knowledge compared to respondents from lower classes. On the other hand respondents who were in junior classes were found to have poor knowledge regarding HIV. Majority of the respondents from class 9^{th} (85.2%) had poor knowledge level followed by class

8th (82.5%) and class 7th (75.8%) respondents. It may be because senior class students had this topic under their syllabus therefore they had better knowledge. The difference was found to be statistically significant.

A study conducted in Agra depicts that Knowledge on modes of transmission and prevention of HIV/AIDS is poor among 7th to 9th class students of Agra. The reproductive health education should be a part of curriculum in all schools. Public awareness programme should be directed to society (Verma et.al, 2016). Where as in another study which was conducted on 14 – 21 years of adolescents depicts good knowledge level of adolescents regarding HIV. The above two research studies support the present research findings. The study also reveals that by disseminated sex education and HIV knowledge in schools HIV cases can be controlled (Otman 2015).

The data pertaining to gender illustrates that maximum percentage of females (29.0%) had better knowledge level in comparison to their counterparts (17.6%). The difference was found to be statistically significant at 0.001 level of significance. Further, probing into the age of respondents it was found that maximum percentage of respondents (26.0%) whose age was more than 14 years were found to have better knowledge level in comparison to respondents who were younger than them i.e. less than 14 years of age (21.1%). Statistically, the difference was found to be highly significant. Religion data elucidates that maximum percentage of respondents (26.8%) who belonged to Hindu religion were found to have high level of knowledge followed by respondents from Muslim religion (19.4%) and Punjabi religion (3.1%). The data was found to be highly significant statistically.

The captured data regarding family income of respondents reflect that more is the family income higher is the level of knowledge regarding HIV. The maximum percentage of respondents (30.8%) who had family income more than 8000 were found to have high level of HIV knowledge followed by those respondents (23.8%) who had family income between 3000 to 8000. Majority of the respondents (81.5%) who had income between 1500 to 3000 were found to have poor knowledge level. Statistically, the result was found to be highly significant.

In an another study a statistically significant association between gender, age and knowledge was found in studied sample, in which good knowledge was higher among males and among age group more than 19 years ($P < 0.001$). On the other hand, there was also a statistically significant association between knowledge and socio-economic status of students, in which good

knowledge was highest among students with high socio-economic status (P value < 0.001), (Othman, 2014).

Joshi & Mehendale 2019 study also supported the above discussed research findings which shows population size, density and urbanization were found to be positively associated with consistently high HIV prevalence in these districts. Higher levels of literacy, better socio-economic status, higher proportion of population in reproductive age group and late marriages were positively associated with consistently high HIV prevalence in all regions of India except in the Southern region. Higher levels of knowledge about the role of condoms in HIV prevention and condom use were associated with low HIV prevalence at the district level (Joshi & Mehendale, 2019) .

Furthermore, the data regarding Father's education reveals that the majority of the respondents (32.8%) who had father's educated upto Graduation were found to have high knowledge level regarding HIV. The fathers who were educated upto 12^{th} or Primary level their wards also reflected good knowledge level regarding HIV i.e. 25.1 percent and 25.4 percent respectively. All respondents (100%) depicted good knowledge level whose father had done ITI and MBA. A different trend was observed in data related to Mother's education. The mothers who were more educated, their wards had high knowledge level in comparison to those mothers who were less educated. The majority of the respondents (43.2%) whose mothers were educated upto BA depicted high knowledge level followed by those respondents (26.5%) whose mothers were educated upto intermediate. Majority of the respondents (79.2%) whose mothers were uneducated reflected poor knowledge level followed by those whose mothers were educated upto primary level (79.1%). The result was found to be significant at 0.05 level of significance.

No difference was observed in level of knowledge in terms of type of family. The obtained data regarding fathers and mothers occupations depicts that the majority of the respondents (28.5%) whose fathers were in service depicted highly knowledge level followed by farmers (26.9%) and labour (22.9%). The poor level of knowledge was showed by majority of those respondents (87.7%) whose fathers were unemployed followed by business (80.7%) and labour (77.1%). Among mothers, it was evident from the table that half of the respondents (50%) whose mothers were service class depicted high knowledge level followed by housewife (24.4%)

and labour (14.9%). The majority of the respondents (88.9%) whose mothers were running their own Business depicted poor knowledge level followed by those whose mothers were farmers (86.7%) and labour (85.1%). Statistically, the results were found to be highly significant.
Therefore, the table signifies that location, class, age, religion, gender, income, fathers and mother education and occupation has significant association with HIV knowledge.

SECTION 7: KNOWLEDGE AND PERCEPTION ON DRUG USE AND MISUSE

The use of drugs dates back into the pre-history of man. Such drugs were used to relieve pain or cure and control diseases (Curew and Dibal, 1999). Drugs as defined by the World Health Organization (1967) is any substance which taken by living organisms may modify the functions of living organism. The National Agency for Food and Drug Administration and Control (NAFDAC, 1999), stated that situations of ill-health provide the compelling need for drugs that is in order to modify the functions of the body and restore it to life. However, the major issue with drugs is not in its use for curative purposes but in the abuse and misuse of these drugs especially when these drugs are psychoactive drugs.

The consumption level of hard drugs has risen sharply in adolescents within the last two decades. Such drugs like heroine, cocaine, cannabis and even alcohol have in recent times become so easily accessible by individuals of much cancer is the high prevalence of the use of these drugs among adolescents. Adolescents use drugs for several reasons among which are, for experimentation, mere fun and excitement, peer pressure, to get over depression and other psychological problems, etc. However, the use of these drugs among young people has so much effect on individuals, families and the society at large. The problems range from social, psychological, economical and even political problems. Present section of this research was planned to find out the knowledge and perception of drug use and abuse among adolescents of Udham singh nagar. The research was also aimed at ascertaining whether drug abuse has a role to play in the academic performance of students. In carrying out this study, questionnaire was administered to respondents (students) in their various schools to collect relevant data. The data collected from the respondents were analyzed, interpreted and presented below.

Table 4.7a: Association between demographic variables and perception regarding occasion of drug consumption

Variables		Occasion of Drug Consumption						
		Before Examination f (%)	Before the Game f (%)	At Parties f (%)	At Home f (%)	At Festivals f (%)	Chi^2	p-value
Block	**Total respondents N=4230 (100)**	437 (10.33)	552 (13.04)	1187 (28.06)	464 (10.96)	1590 (37.58)		
	Gadarpur	57 (8.0)	82 (11.5)	209 (29.5)	66 (9.3)	297 (41.7)	44.1	0.001 (S)
	Jaspur	88 (12.5)	105 (14.9)	196 (27.7)	84 (11.8)	234 (33.1)		
	Kashipur	73 (10.1)	82 (11.4)	208 (28.8)	76 (10.5)	283 (39.2)		
	Kichha	78 (11.0)	94 (13.3)	199 (28.2)	83 (11.7)	253 (35.8)		
	Rudrapur	60 (8.8)	78 (11.4)	192 (28.1)	64 (9.4)	289 (42.3)		
	Sitarganj	81 (11.6)	111 (15.9)	183 (26.1)	91 (13.0)	234 (33.4)		
	Female	146 (6.8)	`188 (8.7)	699 (32.4)	179 (8.3)	947 (43.8)		
Gender	Male	291 (14.0)	364 (17.6)	488 (23.5)	285 (13.8)	643 (31.1)	222.3	0.001 (S)
	Hindu	246 (10.3)	332 (13.9)	626 (26.2)	295 (12.3)	891 (37.3)		
Religion	Muslim	190 (10.5)	220 (12.2)	540 (29.9)	168 (9.3)	689 (38.1)	39.70	0.001 (S)
	Punjabi	1 (3.0)	0 (0.0)	21 (63.6)	1 (3.0)	10 (30.4)		
	Graduation	7 (10.9)	2 (3.1)	25 (39.1)	3 (4.7)	27 (42.2)		
Fathers Education	ITI	0 (0.0)	0 (0.0)	2 (66.7)	1 (33.3)	0 (0.0)	67.32	0.001 (S)
	MBA	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)	4 (100.0)		
	Master	5 (10.6)	6 (12.8)	11 (23.4)	0 (0.0)	25 (53.2)		
	Primary	98 (13.9)	97 (13.9)	184 (26.2)	62 (8.9)	260 (37.1)		
	Six to Intermediate	127 (8.6)	231 (15.7)	405 (27.5)	154 (10.4)	558 (37.8)		
	Uneducated	119 (9.6)	121 (9.8)	370 (29.9)	140 (11.4)	486 (39.3)		
	BA	5 (5.7)	7 (7.9)	13 (14.8)	6 (6.9)	57 (64.7)		

Mothers Education	Primary	39 (8.9)	48 (11.0)	119 (27.3)	52 (11.9)	178 (40.9)	37.8	0.001 (S)
	Uneducated	207 (10.0)	286 (13.8)	570 (27.6)	191 (9.3)	811 (39.3)		
	Six to Intermediate	88 (10.2)	110 (12.8)	274 (31.8)	85 (9.8)	305 (35.4)		
	Joint	100 (9.6)	153 (14.6)	327 (31.3)	93 (8.9)	373 (35.6)		
Type of Family	Single/Nuclear	337 (10.6)	399 (12.5)	860 (27.0)	371 (11.7)	1217 (38.2)	15.3	0.004 (S)
	Business	64 (13.6)	62 (13.1)	130 (27.5)	76 (16.1)	140 (29.7)		
Fathers Occupation	Farmer	69 (12.3)	72 (12.8)	162 (28.8)	61 (10.9)	198 (35.2)	71.0	0.001 (S)
	Labour	248 (9.2)	326 (12.2)	779 (29.0)	259 (9.7)	1072 (39.9)		
	Service	52 (11.8)	84 (19.1)	90 (20.5)	56 (12.8)	157 (35.8)		
	Unemployed	4 (5.5)	8 (11.0)	26 (35.6)	12 (16.4)	23 (31.5)		
	Business	0 (0.0)	0 (0.0)	1 (11.1)	0 (0.0)	8 (88.9)		
Mothers Occupation	Farmer	5 (16.6)	2 (6.7)	2 (6.7)	2 (6.7)	19 (63.3)	33.3	0.001 (S)
	Housewife	397 (10.5)	489 (12.9)	1078 (28.5)	405 (10.7)	1412 (37.4)		
	Labour	34 (8.4)	59 (14.6)	105 (25.9)	57 (14.2)	149 (36.9)		
	Service	1 (16.7)	2 (33.3)	1 (16.7)	0 (0.0)	2 (33.3)		
	Less than or equal to14 years	222 (10.2)	307 (14.1)	563 (26.0)	253 (11.7)	821 (38.0)		
Age	Greater than 14 years	215 (10.4)	245 (11.9)	624 (30.2)	211 (10.2)	769 (37.3)	13.2	0.01 (S)
	Less than 1500	90 (9.8)	83 (8.9)	289 (31.3)	72 (7.8)	390 (42.2)		
Income	1501-3000	101 (11.1)	129 (14.1)	251 (27.5)	125 (13.7)	307 (33.6)	52.0	0.001 (S)
	3001 to 8000	125 (12.4)	132 (13.1)	306 (30.4)	113 (11.2)	332 (32.9)		
	More than 8001	81 (10.6)	108 (14.2)	194 (25.4)	93 (12.2)	287 (37.6)		

Drug abuse is very common problem among youths nowadays. The data in Table 4.7a to 4.7g illustrates the association between demographic variable and perception of respondents regarding occasion, means, cause of drug abuse and its related issues.

The table 4.7a presents data related to occasion of drug consumption. Among 4230 respondents, majority of the respondents (37.58%) perceive that mostly people consume drugs

during festivals followed by at parties (28.06%), before the game (13.04%), at home (10.96 %) and before examination (10.33%). Less than half of the (42.3%) respondents from Rudrapur perceived that the drug is consumed mainly during festivals followed by respondents (41.7%) from Gadarpur. About 29.5 percent respondents from Gadarpur perceived that drugs are consumed at parties followed by 14.9 percent of the respondents from Jaspur according to them it is consumed before game. The consumption of drugs at homes and before examination is perceived by around 13 percent and 12.5 percent of the respondents belonging to Sitarganj and Jaspur Block respectively. The difference was found to be statistically significant.

The majority of the females (43.8%) perceived that the drug is consumed more on the occasion of festivals followed by at parties (32.4%) and before the games. Similar perception was recorded among male respondents also. However, maximum percentage of male (14.0%) perceived that drug is consumed more before examination in comparison to their counterparts (6.8%). Similar perceptual difference was recorded for occasion of consumption of drugs before game (M-17.6%, F-8.7%) and at home (M-13.8%, F-8.3%) also. The difference was found to be significant at 0.001 level of significance.

As per the religion, majority of the respondents (63.6%) belonging to Punjabi families perceived that drug is consumed more at parties followed by 38.1 percent and 37.3 percent of Muslims and Hindus respectively according to them it is consumed at festivals. Only a small percentage of respondents (3.0%) from Punjabi families believed that it is consumed at home or before examination. Statistically, the difference was found to be significant.

The significance of parental education in developing perception of their children is eminent in various studies. Therefore, the table further illustrates that all the respondents (100.0%) whose fathers had done MBA perceived that the drug is consumed more during festivals while the maximum percentage of those wards respondents whose fathers had done ITI (66.7%) perceived that it is consumed more at parties. More drug consumption before examination is perceived by maximum percentage of those respondents (13.9%) whose fathers were educated till primary level. According to the 15.7 percent of respondents whose fathers were educated upto intermediate stated that the drug is consumed before the game. Further, the data related to mothers education asserted that majority of the respondents (64.7%) whose mothers were educated upto B.A. and primary level (40.9%) perceived that the drug is consumed maximum at festivals. The mothers who were educated upto intermediate their children stated

that it is consumed more at the party or before the examination i.e. 31.8% and 10.2% respectively. About 13.8 percent of respondents whose mothers were uneducated perceived that it is consumed more before examination. Statistically, fathers' and mothers education was found to be significantly associated with occasion of drug abuse.

The type of family in which an individual reside plays an important role in building ones opinion. The majority of the children (38.2%) who belonged to nuclear families stated that the drug is consumed more at festivals in comparison to those respondents who belonged to joint family (35.6%). Drugs is consumed more at homes (11.7%) and before exams (10.6%) as stated by respondents belonging to nuclear family whereas respondents from joint family stated that it is consumed more at parties (31.3%) and before games (14.6%). The difference was found to be statistically significant.

The data pertaining to parental occupation depicts that around 13.6 percent of the respondents whose fathers were businessman reflected that drug is consumed before examination followed by those respondents whose fathers were farmers (12.3%). Consumption of drugs before game is in trend is perceived by those respondents whose fathers were service class (19.1%). About 35.6 percent of respondents whose fathers were uneducated stated that drugs are consumed more at parties. The maximum percentage of respondents (16.4%) whose fathers were unemployed stated that it is consumed more at homes. The respondents whose fathers were either labour or service class perceived that it is consumed more in festivals i.e. 39.9% and 35.8% respectively. Data regarding mothers' occupation reflect that majority of the respondents (88.9%) whose mothers were engaged in business stated that drug is consumed more at festivals followed by those respondents whose mothers were farmers (63.3%). The consumption of drugs before examination and before games is perceived by 16.7 percent and 33.3 percent of the respondents respectively, whose mothers were occupied in services. About 28.5 percent of the respondents whose mothers were housewives reported that it is consumed more at parties whereas 14.2 percent of respondents whose mothers were working as labour perceived that it is consumed more at homes. Statistically, it was found that parental occupation has highly significant association with perception regarding occasion of drug abuse.

Data related to age elucidate that age also has significant association with perception regarding occasion of drug abuse. Almost equal percentage of respondents whether less than 14 years of age (38.0%) or more than 14 years of age (37.3%) perceived that it is consumed more at

festivals. Similar results were obtained for consumption of drugs before exams i.e. respondents below 14 years (10.2%) and above 14 years (10.4%) perceived same. Around 30.2 percent of the respondents above 14 years of age perceived that it is consumed more at parties in comparison to respondents below 14 years of age (26.0%) on the other hand 14.1 percent of respondents with age less than 14 years stated that drugs are consumed before games in comparison to elder respondents (11.9%). The drug is consumed more at home is reported by respondents (11.7%) who were less than 14 years. The difference was found to be significant at 0.05 level of significance. Majority of the respondents who had income less than 1500 and more than 8000 perceived that it is consumed more at festivals i.e. 42.2 percent and 37.6 percent respectively. Around 31.3 percent and 30.4 percent of the respondents with income less than 1500 and income between 3000 to 8000 respectively perceived that it is consumed more at parties. A small percentage of respondents (12.4%) with income between 3000 to 8000 perceived that it is consumed more before the examination whereas 14.2 percent and 14.1 percent of respondents with income more than 8000 and between 1500 to 3000 respectively stated that drugs are consumed more before the games. The drugs are consumed more at homes is reported by 13.7 percent of respondents who had income between 1500 to 3000. The difference was found to be statistically significant.

Thus, it can be concluded from the above table that locale, gender, age, income, type of family, religion, parental education and occupation has significant association with perceptions of respondents regarding occasion of drug abuse.

Table 4.7b. Association between demographic variables and perception regarding means of drug addiction

Variables		**Means of addiction**					
		By Smelling f (%)	**Smoking f (%)**	**By Mouth f (%)**	**By injection f (%)**	**Chi^2**	**p-value**
Total respondents N=4230 (100)		874 (20.66)	1516 (35.85)	1220 (28.84)	620 (14.65)		
Block	Gadarpur	160 (22.5)	268 (37.7)	187 (26.3)	96 (13.5)	35.3	0.002 (S)
	Jaspur	134 (18.9)	226 (31.9)	230 (32.6)	117 (16.6)		
	Kashipur	143 (19.8)	278 (38.5)	215 (29.8)	86 (11.9)		

	Kichha	151 (21.4)	256 (36.2)	183 (25.8)	117 (16.6)		
	Rudrapur	156 (22.8)	258 (37.8)	182 (26.6)	87 (12.8)		
	Sitarganj	130 (18.6)	230 (32.9)	223 (31.8)	117 (16.7)		
Gender	Female	457 (21.2)	`832 (38.5)	640 (29.6)	230 (10.7)	58.7	0.001 (S)
	Male	417 (20.2)	684 (33.0)	580 (28.0)	390 (18.8)		
Religion	Hindu	434 (18.2)	838 (35.0)	783 (32.8)	335 (14.0)	60.3	0.001 (S)
	Muslim	440 (24.3)	661 (36.6)	427 (23.6)	279 (15.5)		
	Punjabi	0 (0.0)	17 (51.5)	10 (30.3)	6 (18.2)		
Fathers Education	Graduation	22 (34.4)	19 (29.7)	15 (23.4)	8 (12.5)	54.6	0.001 (S)
	ITI	1 (33.3)	2 (66.7)	0 (0.0)	0 (0.0)		
	MBA	0 (0.0)	4 (100.0)	0 (0.0)	0 (0.0)		
	Master	19 (40.4)	13 (27.6)	12 (25.6)	3 (6.4)		
	Primary	155 (22.1)	235 (33.5)	220 (31.4)	91 (13.0)		
	Six to Intermediate	260 (17.6)	535 (36.3)	443 (30.0)	237 (16.1)		
	Uneducated	253 (20.5)	492 (39.8)	304 (24.6)	187 (15.1)		
Mothers Education	BA	23 (26.1)	39 (44.3)	12 (13.7)	14 (15.9)	47.7	0.001 (S)
	Primary	81 (18.6)	129 (29.6)	142 (32.6)	84 (19.2)		
	Uneducated	435 (21.1)	805 (38.9)	525 (25.4)	300 (14.6)		
	Six to Intermediate	166 (19.2)	311 (36.1)	285 (33.1)	100 (11.6)		
Type of Family	Joint	202 (19.3)	347 (33.2)	304 (29.1)	193 (18.4)	17.6	0.001 (S)
	Single/Nuclear	672 (21.1)	1169 (36.7)	916 (28.8)	427 (13.4)		
	Business	107 (22.6)	161 (34.1)	122 (25.9)	82 (17.4)	71.0	0.001 (S)
Fathers	Farmer	106	207	172	77		

Occupation		(18.9)	(36.8)	(30.6)	(13.7)		
	Labour	579 (21.6)	984 (36.7)	775 (28.8)	346 (12.9)		
	Service	80 (18.2)	143 (32.6)	131 (29.8)	85 (19.4)		
	Unemployed	2 (2.7)	21 (28.8)	20 (27.4)	30 (41.1)		
Mothers Occupation	Business	3 (33.3)	5 (55.6)	0 (0.0)	1 (11.1)	33.3	0.001 (S)
	Farmer	7 (23.3)	4 (13.3)	18 (60.0)	1 (3.4)		
	Housewife	774 (20.5)	1383 (36.6)	1074 (28.4)	550 (14.5)		
	Labour	90 (22.3)	122 (30.2)	124 (30.7)	68 (16.8)		
	Service	0 (0.0)	2 (33.3)	4 (66.7)	0 (0.0)		
Age	Less than or equal to14 years	444 (20.5)	722 (33.3)	649 (29.9)	351 (16.3)	17.0	0.001 (S)
	Greater than 14 years	430 (20.8)	794 (38.5)	571 (27.6)	269 (13.1)		
Income	Less than 1500	276 (29.9)	318 (34.4)	211 (22.8)	119 (12.9)	74.6	0.001 (S)
	1501-3000	158 (17.3)	317 (34.7)	293 (32.1)	145 (15.9)		
	3001 to 8000	187 (18.5)	318 (31.6)	327 (32.4)	176 (17.5)		
	More than 8001	145 (19.0)	284 (37.2)	223 (29.2)	111 (14.6)		

The data furnished in table 4.7b reveals that mostly respondents perceive that majority of the people consume drugs by smoking (35.85), followed by mouth (28.84), by smelling (20.66) and by injection (14.65). Most of the respondents from Kashipur (38.5%) followed by respondents from Rudrapur (37.8%) and Gadarpur (37.7%) perceived that smoking is the means of addiction which is used by mostly respondents. Oral i.e. by mouth is the second foremost method which is used by the drug users as perceived by maximum percentage of respondents from Jaspur (32.6%) and Sitarganj (31.8%). Around 22.8%, 22.5% and 21.4% of respondents from Rudrapur, Gadarpur and Kichha respectively perceived that smelling is another means of addiction which is quite popular. Only small percentage of respondents from Sitarganj (16.7%) and equal percentage of respondents i.e. 16.6% from Kichha and Jaspur stated that according to

them injections are used for intake of drugs. Statistically, the difference was found to be significant.

Above research findings is supported by other researches which found that In most western countries, the initiation of smoking rises mostly during adolescence, killing half of the all lifetime (Joffer et.al.,2014). Greater than half of the adolescents in the U.S. report alcohol use, and approximately one-fourth report exposure to illicit drugs (Merikangas & McClair 2012). In the Netherlands, the UK, and the US, smoking rates increased from 7% of 11 years old to 45% by the age of 14 years and 62% by age 17 years in 2009 (McGee et.al., 2013). Smoking epidemic and its consequence are more common in the developing countries in South Asia such as Pakistan, India, Bangladesh, and Nepal, as the major section of their population involves adolescents (Rao et.al., 2014). Global Youth Tobacco Survey in India showed that 3.8% of students smoke and 11.9% use smokeless tobacco (Sinha et.al.,2006).

With reference to gender, maximum percentage of females perceived that mostly smoking (38.5%) is used as a means of drug addiction is followed by mouth (29.6%) and smelling (21.2%) in comparison to their counterparts. Around 18.8% of males stated that injection is mostly in comparison to females (10.7%). As per the religion more than half of the respondents (51.5%) from Punjabi families perceived that smoking is the means of addiction followed by respondents from Muslim (36.6%) and Hindu families (35.0%). Around 32.8 percent of Hindu respondents stated that drug is consumed by oral means followed by 30.3 percent of respondents from Punjabi families. Drug consumption through smelling is the mean of addiction which the maximum percentage (24.3%) of Muslim respondents observed. About 18.2% and 15.5% of respondents from Punjabi and Muslim families respectively stated that injection is widely used means for drug addiction. The difference was found to be significant at 0.001 level of significance.

Further probing into the table, data associated with parental education depicts that all the respondents (100.0%) whose fathers had done MBA perceived that smoking is used mostly for drug consumption followed by those respondents whose fathers had done ITI (66.7%). Similarly, as far as mother education is concerned, around 44.3 percent of the respondents whose mothers had done B.A. perceived smoking as a means of addiction majorly followed by children of uneducated mothers (38.9%). Smelling as a mean of addiction is reported by 40.4% of the respondents whose fathers had done Masters followed by respondents (34.4%) of graduated

fathers while on the other hand maximum percentage of respondents (26.1%) who had mothers educated upto BA or either uneducated (21.1%) considered smelling as a means of addiction. Oral means of addiction is reported by those respondents whose mothers were educated upto intermediate level (33.1%) followed by primary level (32.6%) while 31.4% and 30.0% of respondents whose fathers were educated upto primary and intermediate level respectively reported the same. A small percentage of respondents (16.1%) whose fathers were educated upto intermediate and mothers educated upto primary level (19.2%) perceived use of injection as a means of addiction. The difference was found to be statistically significant.

The data regarding type of family reflects that smoking (36.7%) and smelling (21.1%) is considered as a major means of drug addiction by respondents who belonged to nuclear family in comparison to those respondents who live in joint families while on the other hand respondents who belonged to joint families perceived that intake of drugs by mouth (29.1%) and injection (18.4%) is majorly practiced.

According to a study conducted by the National Commission for Protection of Child Rights, the common drugs of abuse among children and adolescents are tobacco and alcohol, followed by inhalants and cannabis. The mean age of onset was lowest for tobacco (12.3 years), followed by onset of inhalants (12.4 years), cannabis (13.4 years), alcohol (13.6 years), proceeding then to the use of harder substances – opium, pharmaceutical opioids, heroin (14.3–14.9 years) and then substances through injecting route (15.1 years) (Tikoo et.,al, 2013). In another study, 46.36% of slum dwelling adolescents used both smokeless and smoking tobacco in addition to alcohol and cannabis and started using drugs during their childhood itself (Sharma & Chaudhary 2016). A high percentage of adolescents in Assam were found using alcoholic drinks with a male preponderance. They begin taking alcoholic drinks at a very young age with parents' indulgence in tobacco, alcohol, or both (Mahanta et.al, 2016). In a study conducted among school-going students, alcohol and heroin were the main substances of abuse (Goswami 2015). An emerging trend is the use of cocktail of drugs through injection, and often sharing the needle, which increases their risk of HIV infection (CPCR 2016). A high intravenous use of drugs among street children and working children has been reported (Tikoo et.,al, 2013). There are one million registered heroin addicts in India and cannabis products, such as charas, bhang, or ganja, are abused throughout the country (Agarwal et.al, 2013).

Data related to age illustrates that almost equal percentage of respondents who had age less than (20.5%) or more than 14 (20.8%) perceived smelling as medium for drug consumption. Smoking is considered as a major means of drug consumption by respondents who had age more than 14 years (38.5%) in comparison to those who were younger than 14 years (33.3%). Around 29.9% and 16.3% of respondents who were less than 14 years of age perceived oral means and injection as a major way for consumption of drugs.

Data pertaining to family income of the respondents ascertain that almost equal percentage of respondents who had income between 1500 to 3000 (32.1%) and 3000 to 8000 (32.4%) assert that drug consumption is more by mouth. Majority of the respondents (37.2%) with family income more than 8000 perceived smoking as a mean of drug addiction followed by those respondents who had income between 1500 to 3000. Maximum percentage of respondents (29.9%) with income less than 1500 perceived smelling as a mean of addiction. Injection is used often is reported by around 17.5% of the respondents who had income between 3000 to 8000. Statistically, the difference was found to be significant.

The data regarding occupation of parents signify that majority of the respondents (41.1%) whose fathers were unemployed perceived that drug is mostly consumed through injection. Smoking is another majorly used means of drug addiction was reported by 36.8 percent and 36.7 percent of the respondents whose fathers were farmers and labour respectively. Around 30.6% and 22.6% of respondents whose fathers were employed as farmer and were running their own business respectively stated that drugs intake is through mouth followed by smelling. Majority of the respondents (66.7%) whose mothers were service class followed by those respondents whose mothers were farmers (60.0%) perceived that drug is consumed orally. More than half of the respondents (55.6%) whose mothers were running their own business stated that smoking is used for drug addiction followed by those respondents whose mothers were housewives (36.6%). Smelling as a means of drug addiction was reported by 33.3% and 23.3% of the respondents whose mothers were engaged as business and farmers respectively. Mothers who were engaged as labour or housewives, their maximum percentage of children perceived that injection is used widely for drug consumption i.e. 16.8% and 14.5% respectively. The difference was found to be statistically significant.

So, based on the data it can be concluded that locale, gender, age, income, type of family religion, parental occupation and education has significant association with perception regarding means of addiction.

Table 4.7c. Association between demographic profile and knowledge regarding government de-addiction centre

Variables		Government de-addiction centre		
		Yes	Chi^2	p-value
Block	Gadarpur	360 (50.6)	11.7	0.03 (S)
	Jaspur	326 (46.1)		
	Kashipur	356 (49.3)		
	Kichha	343 (48.5)		
	Rudrapur	344 (50.3)		
	Sitarganj	302 (43.1)		
Gender	Female	1266 (58.6)	199.4	0.001 (S)
	Male	765 (36.9)		
Religion	Hindu	1098 (45.9)	26.4	0.001 (S)
	Muslim	928 (51.3)		
	Punjabi	5 (15.1)		
Fathers Education	Graduation	30 (46.8)	10.7	0.09 (NS)
	ITI	1 (33.3)		
	MBA	4 (100.0)		
	Master	15 (31.9)		
	Primary	349 (49.7)		
	Six to Intermediate	703 (47.6)		
	Uneducated	606 (49.0)		
Mothers Education	BA	27 (30.6)	16.8	0.001 (S)
	Primary	211 (48.3)		
	Uneducated	1072 (51.9)		

	Six to Intermediate	423 (49.0)		
Type of Family	Joint	496 (47.4)	0.1	0.6 (NS)
	Single/Nuclear	1535 (48.2)		
Fathers Occupation	Business	217 (45.9)	29.4	0.001 (S)
	Farmer	260 (46.2)		
	Labour	1351 (50.3)		
	Service	163 (37.1)		
	Unemployed	40 (54.7)		
Mothers Occupation	Business	8 (88.8)	12.7	0.01 (S)
	Farmer	14 (46.6)		
	Housewife	1837 (48.5)		
	Labour	169 (41.8)		
	Service	3 (50.0)		
Age	Less than or equal to14 years	1033 (47.6)	0.1	0.6 (NS)
	Greater than 14 years	998 (48.3)		
Income	Less than 1500	514 (55.6)	44.4	0.001 (S)
	1501-3000	379 (41.5)		
	3001 to 8000	481 (47.7)		
	More than 8001	326 (42.7)		

Knowledge regarding government de-addiction centre and its association with demographic profile is reflected in Table 4.7c. Approximately 50 percent of the surveyed respondents were aware about the available government de-addiction centers and approximately 50 percent were not aware. Almost fifty percent of the respondents from Gadarpur (50.6%) and Rudrapur (50.3%) had knowledge regarding government de-addiction centre. A minimum

percentage of respondents from Sitarganj (43.1%) and Jaspur (46.1%) had knowledge regarding de-addiction centre. The difference was found to be significant at 0.05 level of significance.

Majority of the females (58.6%) had knowledge regarding de-addiction centre in comparison to males (36.9%). More than half of the Muslim respondents (51.3%) had knowledge regarding government de-addiction centre followed by 45.9% and 15.1% of the respondents from Hindu and Punjabi families respectively. Statistically, the difference was found to be significant.

A study conducted in Kashmir to know the levels of awareness regarding the menace of addiction, its treatment and the availability of the organization and agencies associated with the treatment/rehabilitation of the drug addicts in the valley of Kashmir reveals that although 87.33% respondents are aware about the process of drug de-addiction, but 92.67% of respondents do not know about the drug de-addiction/treatment center(s) being run in Srinagar city. Only 3.33% of respondents knew about NGO(s) working in the field of drug de-addiction in Srinagar city. But in present research finding it was found that in Udham Singh block more than half of the respondents were aware about government Drugs de addiction centers.

Data related to fathers' education depicts that statistically it has no association with knowledge regarding government de-addiction centre while in case of mothers education it was found that statistically, it has significant association with children knowledge regarding government de-addiction centre. More than half of the respondents (51.9%) who had uneducated mothers were found to have knowledge regarding government de-addiction centre followed by those respondents (49.0%) whose mothers were educated upto intermediate level.

As far as type of family and age of the respondents is concerned it was found to be non-significantly associated with knowledge regarding government de-addiction centre.

Further that data gathered regarding parental occupation depicts that more than half of the respondents whose fathers were unemployed was found to have knowledge regarding government de-addiction centre followed by those respondents (50.3%) whose fathers were working as labour. Majority of the respondents (88.8%) whose mothers were engaged in business were found to have knowledge about centre. About fifty percent of the respondents whose mothers were doing service had knowledge regarding centre followed by those respondents (48.5%) whose mothers were housewives. The difference was found to be significant.

Further data related to income signify that more than half of the respondents (55.6%) who had family income less than 1500 were found to have knowledge reading government de-addiction centre followed by those respondents (47.7%) who had family income between 3000 to 8000. The difference was found to be significant.

Therefore, it can be concluded from the obtained data that locale, gender, religion, mothers education, parental occupation and income of the family has significant association with knowledge reading government de-addiction centre whereas fathers education, type of family and age was found to be non-significantly associated.

Table 4.7d: Association between demographic variables and effect of telecommunication on drug use

Variables		**Effect of telecommunication**		
		Yes	**Chi^2**	**p-value**
Block	Gadarpur	344 (48.3)	2.4	0.7 (NS)
	Jaspur	357 (50.5)		
	Kashipur	357 (49.4)		
	Kichha	358 (50.6)		
	Rudrapur	323 (47.2)		
	Sitarganj	352 (50.2)		
Gender	Female	1099 (50.9)	3.8	0.04 (S)
	Male	992 (47.9)		
Religion	Hindu	1229 (51.4)	13.9	0.001 (S)
	Muslim	840 (46.4)		
	Punjabi	22 (66.6)		
Fathers Education	Graduation	35 (54.6)	18.2	0.006 (S)
	ITI	2 (66.6)		
	MBA	0 (0.0)		
	Master	26 (55.3)		

	Primary	307 (43.7)		
	Six to Intermediate	763 (51.7)		
	Uneducated	627 (50.7)		
Mothers Education	BA	42 (47.7)	4.1	0.2 (NS)
	Primary	208 (47.7)		
	Uneducated	992 (48.0)		
	Six to Intermediate	448 (51.9)		
Type of Family	Joint	493 (47.1)	2.9	0.08 (NS)
	Single/Nuclear	1598 (50.1)		
Fathers Occupation	Business	243 (51.4)	19.4	0.001 (S)
	Farmer	314 (55.8)		
	Labour	1263 (47.0)		
	Service	229 (52.1)		
	Unemployed	42 (57.5)		
Mothers Occupation	Business	5 (55.5)	29.4	0.001 (S)
	Farmer	4 (13.3)		
	Housewife	1845 (48.8)		
	Labour	232 (57.4)		
	Service	5 (83.3)		
Age	Less than or equal to14 years	1069 (49.3)	0.01	0.9 (NS)
	Greater than 14 years	1022 (49.5)		
Income	Less than 1500	452 (48.9)	12.9	0.005 (S)
	1501-3000	464 (50.8)		
	3001 to 8000	465 (46.1)		
	More than 8001	416 (54.5)		

The data presented in Table 4.7d furnishes information related to effect of telecommunication. Statistically, locale was found to have no association with effect of telecommunication.

Gender related data mentions that 50.9 percent of female respondents believed that telecommunication has effect on youth's ideology in comparison to male respondents (47.9%). As far as religion is concerned 66.6% of the respondents who belonged to Punjabi families believed that radio, television and other sources has effect on the mindset of youths regarding drug abuse followed by more than half of the respondents (51.4%) who belonged to Hindu families. The difference was found to be statistically significant.

Young people experimenting with drugs and alcohol are nothing new; however, social networking sites are offering new and dangerous opportunities for adolescents to be exposed to drugs. Jena Hilliard study conducted in 2019 supports the above research findings. She found that social media has begun to desensitize children to these activities at a younger age — 90% of the kids surveyed saw these types of photos of their peers online before they were even 16 years old. Nearly half of all teens who have seen such pictures perceived that the kids in the photos "are having a good time." Teens who have come across these kinds of photos are 4 times more likely to have used marijuana and 3 times more likely to have consumed alcohol compared to kids who had not viewed this type of picture.

Majority of the respondents (66.6%) whose fathers were educated ITI firmly believed that telecommunication has major role in building their perception regarding drug abuse. The 55.3% and 54.6% of respondents whose fathers were educated upto masters and graduation respectively had the same perception. The difference was found to be significant depicting that father education has association with effect of telecommunication while on the other hand mother education was not found to be significantly associated with effect of telecommunication. Likewise, age and type of family was also not found to be significantly associated with effect of telecommunication.

Maximum percentage of the respondents (57.5%) whose fathers were unemployed perceived that telecommunication is very effective in building attitude towards drug abuse while on the other hand 83.3% of the respondents whose mothers were engaged in services believe the same. 55.8% and 52.1% of the respondents whose fathers were doing farming and services

respectively stated that telecommunication is very effective to develop outlook of youths towards drug abuse. Similarly, the respondents whose mothers were occupied as labour (57.4%) and were running their own business (55.5%) believed that effect of telecommunication in respect to drug abuse is noteworthy. The difference was found to be statistically significant.

A study conducted by the National Center on Addiction and Substance Abuse at Columbia University also supports the above research findings at certain extent which found that teenagers who regularly use popular social media outlets were more likely to drink, use drugs, and buy tobacco than adolescents who either did not use social media or used it less frequently (Hilliard 2019).

Family income of the respondents reveals that more than half of the respondents (54.5%) whose income was more than 8000 perceived that telecommunication is very effective means to communicate about drugs and its related issues followed by those respondents (50.8%) whose income was between 1500 to 3000. The difference was found to be significant. This research finding is supported by the researchers such as Atkin (1995), Pierce et.al.(1998), Goddings et.al.,(2014) who also found the similar result in their studies. Their research findings reveled that advertising may be responsible for up to 30% of adolescent tobacco and alcohol use. Banning advertisement of alcohol is an effective approach to reducing and preventing problematic alcohol use and alcohol-related harm in adolescents (Breslau et.al, 2005).

Thus, it can be inferred from the table that locale, mother education, type of family and age was not found to be associated with effect of telecommunication while on the other hand gender, religion, father education, parental occupation and income was found to be significantly associated with telecommunication effectiveness.

Table 4.7e: Association between demographic variables and cause of drug use

Variables	**Cause of Drug Use**					
	Psychological problems) Anxiety/Depression/ Loneliness /Pessimistic thinking f (%)	**Hedonistic nature (Excitement/ excessive pleasure/excessive self-confidence) f (%)**	**Addiction (Lack of resistant power, dependency on intoxicants)**	**Personality disorders (Physical weakness / Anger/lack of sleep or**	**Chi ^{2}**	**p-value**

				f (%)	forgetfulness f (%)		
Block	Gadarpur	327 (45.9)	87 (12.3)	97 (13.7)	200 (28.1)	50.8	0.001 (S)
	Jaspur	244 (34.6)	108 (15.3)	136 (19.2)	219 (30.9)		
	Kashipur	282 (39.1)	80 (11.1)	106 (14.7)	254 (35.1)		
	Kichha	272 (38.5)	87 (12.3)	106 (14.9)	242 (34.3)		
	Rudrapur	309 (45.2)	82 (12.1)	94 (13.8)	198 (28.9)		
	Sitarganj	248 (35.4)	108 (15.4)	126 (18.0)	218 (31.2)		
Gender	Female	1011 (46.8)	`177 (8.2)	384 (17.8)	587 (27.2)	172.4	0.001 (S)
	Male	671 (32.4)	375 (18.1)	281 (13.6)	744 (35.9)		
Religion	Hindu	993 (41.5)	288 (12.0)	362 (15.2)	747 (31.3)	54.9	0.001 (S)
	Muslim	658 (36.4)	264 (14.6)	303 (16.8)	582 (32.2)		
	Punjabi	31 (93.9)	0 (0.0)	0 (0.0)	2 (6.1)		
Fathers Education	Graduation	31 (48.4)	2 (3.1)	14 (21.9)	17 (26.6)	67.4	0.001 (S)
	ITI	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)		
	MBA	0 (0.0)	0 (0.0)	4 (100.0)	0 (0.0)		
	Master	20 (42.5)	5 (10.6)	9 (19.2)	13 (27.7)		
	Primary	316 (45.1)	70 (9.9)	83 (11.9)	232 (33.1)		
	6^{th} -12^{th}	586 (39.7)	195 (13.2)	203 (13.8)	491 (33.3)		
	Uneducated	515 (41.7)	189 (15.3)	201 (16.3)	331 (26.7)		
Mothers Education	BA	62 (70.5)	2 (2.3)	17 (19.3)	7 (7.9)	64.1	0.001 (S)
	Primary	203 (46.6)	55 (12.6)	54 (12.4)	124 (28.4)		
	Uneducated	819 (39.7)	304 (14.7)	321 (15.5)	621 (30.1)		
	6^{th} -12^{th}	345 (40.1)	97 (11.2)	114 (13.2)	306 (35.5)		

Type of Family	Joint	420 (40.1)	129 (12.3)	174 (16.6)	323 (30.8)	1.4	0.6 (NS)
	Single/Nuclear	1262 (39.6)	423 (13.3)	491 (15.4)	1008 (31.6)		
Fathers Occupation	Business	196 (41.5)	77 (16.3)	89 (18.9)	110 (23.3)	33.0	0.001 (S)
	Farmer	199 (35.4)	81 (14.4)	86 (15.3)	196 (34.9)		
	Labour	1102 (41.1)	329 (12.3)	399 (14.8)	854 (31.8)		
	Service	161 (36.6)	56 (12.8)	81 (18.4)	141 (32.1)		
	Unemployed	24 (32.9)	9 (12.3)	10 (13.7)	30 (41.1)		
Mothers Occupation	Business	4 (44.4)	4 (44.4)	0 (0.0)	1 (11.2)	39.9	0.001 (S)
	Farmer	3 (10.0)	1 (3.3)	12 (40.0)	14 (46.7)		
	Housewife	1525 (40.3)	486 (12.9)	577 (15.3)	1193 (31.5)		
	Labour	146 (36.1)	61 (15.1)	75 (18.6)	122 (30.2)		
	Service	4 (66.6)	0 (0.0)	1 (16.7)	1 (16.7)		
Age	< or = 14 yrs.	875 (40.4)	305 (14.1)	355 (16.4)	631 (29.1)	13.0	0.005 (S)
	>14 yrs.	807 (39.1)	247 (11.9)	310 (15.1)	700 (33.9)		
Income	< 1500	383 (41.4)	78 (8.4)	164 (17.8)	299 (32.4)	40.3	0.001 (S)
	1501-3000	382 (41.9)	120 (13.1)	139 (15.2)	272 (29.8)		
	3001 -8000	360 (35.7)	146 (14.5)	142 (14.1)	360 (35.7)		
	>8001	261 (34.2)	113 (14.8)	115 (15.1)	274 (35.9)		

The data depicted in Table 4.7e represents association between demographic variables and cause of drug use. Most of the surveyed respondents Majority of the respondents from Gadarpur (45.9%) and Rudrapur (45.2%) reported that majorly the cause of drug use is psychological problems like anxiety, depression, loneliness, pessimistic thinking etc. The second most reported cause of drug abuse is personality disorder as reported by 35.1% and 34.3%

respondents from Kashipur and Kichha respectively. Around 19.2% and 18.0% of the respondents from Jaspur and Sitarganj respectively assumed that lack of resistant power, dependency on intoxicants led to drug use. Hedonistic nature is another reason that causes drug use as reported by 15.4% and 15.3% of the respondents from Sitarganj and Jaspur respectively. The difference was found to be statistically significant.

Data pertaining to Gender reveal that maximum percentage of females attributed the cause of drug use to psychological problem (46.8%) followed by addiction (17.8%) in comparison to male respondents. Personality disorder (35.9%) followed by hedonistic nature (18.1%) is the cause of drug abuse as reported by majority of the male respondents in comparison to females. Majority of the respondents from Punjabi (93.9%) and Hindu (41.5%) families attributed the cause of drug use to psychological problems. Personality disorder is the second foremost cause of drug use as reported by maximum percentage of respondents from Muslim families (32.2%) followed by Hindu families (31.3%). Around 16.8% and 14.6% of the respondents from Muslim families ascribed the cause of drug use to addiction and hedonistic nature. Maximum percentage of respondents (40.4%) whose age was less than 14 years of age stated that psychological problems cause affinity towards drug use while on the other hand around 33.9% of the respondents whose age was more than 14 years stated that personality disorder led to consumption of drug abuse. About 16.4% and 14.1% of the respondents whose age was less than 14 years associated the cause of drug use with addiction and hedonistic nature respectively. The views of the respondents varied regarding the use of drug as per the family income. Obtained data related to income reflects that maximum percentage of respondents i.e. 41.9% and 41.4% whose income was between 1500 to 3000 and less than 1500 respectively associated the cause of drug abuse to psychological problems. 35.9% and 35.7% of the respondents who had income more than 8000 and between 3000 to 8000 attributed the cause of drug abuse to personality disorder. Addiction is the cause of drug use is mentioned by 17.8% and 15.2% of the respondents whose income was less than 1500 and between 1500 to 3000 respectively. A slightly less percentage of respondents i.e. 14.8% and 14.5% whose income was more than 8000 and 3000 to 8000 respectively attributed the cause of drugs to Hedonistic nature. The difference was found to be statistically significant in case of gender, religion, age and income however the type of family was not found to be non-significantly associated with cause of drug use.

Data associated with parental education depicts that all the respondents (100%) who had done ITI and masters believed that psychological problems and addiction respectively are the cause of drug use. 48.4% of the respondents whose fathers were educated upto graduation believed that psychological problems are the major reason for drug use whereas hedonistic nature is the reason for drug consumption was supported by those respondents whose fathers were either uneducated (15.3%) or educated upto intermediate level (13.2%). Almost equal percentage of respondents whose fathers were educated upto primary (33.1%) or intermediate (33.3%) level stated that the cause of drug use is personality disorder. Majority of the respondents whose mothers were educated upto B.A. (70.5%) or primary level (46.6%) quoted that the main reason for drug use is psychological problems. The 30.1% and 35.5% children of uneducated mothers or mothers who were educated upto intermediate level quoted that the reason for drug consumption is personality disorder. Addiction and hedonistic nature is the reason for drug use is quoted by 19.3% and 14.7% of the children whose mothers were educated upto B.A. and uneducated respectively. The difference was found to be significant.

Data obtained regarding parental occupation depict that majority of the respondents whose fathers were running their own business ascribed the reason for drug use is psychological problem (41.5%), addiction (18.9%) and hedonistic nature (16.3%). 41.1 percent of respondents whose parents were unemployed attributed personality disorder as the main cause of drug use. The majority of the respondents whose mothers were engaged in services (66.6%) or running their own business (44.4%) attributed psychological problems as the main cause of drug use. Around 44.4% of the respondents whose mothers were running their own business credited hedonistic nature as the main cause of drug use. 46.7% and 40.0% of the respondents whose mothers were engaged in farming believed that the cause of drug use is personality disorder and addiction respectively. The difference was found to be statistically significant.

The study conducted by Sharma et.al., in Puri Orisha in 2014 on 5000 university students supports the above research findings. It revealed that of the 1409 students who consumed drugs 85% took drugs because of their psychological reasons ,10% because of social reasons and 28% because if miscellaneous reasons. The detailed analysis poiunted at that the largest number of drug using students comprised individuals who were devoted to pleasure, seeking new excitment and thrill, similarly a small number took drugs as an escape mechanism or to allevate distress .

Table 4.7f: Association between demographic variables and knowledge about drug substances

Variables		Knowledge of Drug Substances				
		Cigarettes, Alcohol, Cannabis f (%)	**Intoxicant chewing gum, tablet, powder f (%)**	**Injection or drug f (%)**	**Chi^2**	**p-value**
Block	Gadarpur	464 (65.3)	180 (25.3)	67 (9.4)	90.6	0.001 (S)
	Jaspur	385 (54.5)	267 (37.8)	55 (7.7)		
	Kashipur	489 (67.7)	163 (22.6)	70 (9.7)		
	Kichha	377 (53.3)	245 (34.7)	85 (12.0)		
	Rudrapur	447 (65.5)	168 (24.6)	68 (9.9)		
	Sitarganj	387 (55.3)	260 (37.1)	53 (7.6)		
Gender	Female	1539 (71.3)	`475 (22.0)	145 (6.7)	223.7	0.001 (S)
	Male	1010 (48.7)	808 (39.0)	253 (12.3)		
Religion	Hindu	1479 (61.9)	691 (28.9)	220 (9.2)	27.7	0.001 (S)
	Muslim	1038 (57.4)	592 (32.8)	177 (9.8)		
	Punjabi	32 (96.9)	0 (0.0)	1 (3.1)		
Fathers Education	Graduation	31 (48.4)	20 (31.3)	13 (20.3)	65.0	0.001 (S)
	ITI	2 (66.7)	1 (33.3)	0 (0.0)		
	MBA	0 (0.0)	4 (100.0)	0 (0.0)		
	Master	14 (29.8)	25 (53.2)	8 (17.0)		
	Primary	466 (66.5)	183 (26.1)	52 (7.4)		
	Six to Intermediate	950 (64.4)	413 (28.0)	112 (7.6)		
	Uneducated	714 (57.8)	382 (30.9)	140 (11.3)		
Mothers Education	BA	56 (63.6)	30 (34.1)	2 (2.3)	18.9	0.004 (S)
	Primary	299	107	30		

		(68.6)	(24.5)	(6.9)		
	Uneducated	1262 (61.1)	614 (29.7)	189 (9.2)		
	Six to Intermediate	531 (61.6)	235 (27.3)	96 (11.1)		
Type of Family	Joint	632 (60.4)	313 (29.9)	101 (9.7)	0.17	0.91 (NS)
	Single/Nuclear	1917 (60.2)	970 (30.5)	297 (9.3)		
Fathers Occupation	Business	218 (46.2)	205 (43.4)	49 (10.4)	120.7	0.001 (S)
	Farmer	337 (59.9)	172 (30.6)	53 (9.5)		
	Labour	1732 (64.5)	730 (27.2)	222 (8.3)		
	Service	233 (53.1)	156 (35.5)	50 (11.4)		
	Unemployed	29 (39.7)	20 (27.4)	24 (32.9)		
Mothers Occupation	Business	6 (66.7)	1 (11.1)	2 (22.2)	21.4	0.006 (S)
	Farmer	17 (56.7)	10 (33.3)	3 (10.0)		
	Housewife	2286 (60.5)	1163 (30.8)	332 (8.7)		
	Labour	236 (58.4)	107 (26.5)	61 (15.1)		
	Service	4 (66.7)	2 (33.3)	0 (0.0)		
Age	Less than or equal to14 years	1285 (59.3)	685 (31.6)	196 (9.1)	3.70	0.15 (NS)
	Greater than 14 years	1264 (61.3)	598 (28.9)	202 (9.8)		
Income	Less than 1500	608 (65.8)	244 (26.4)	72 (7.8)	29.6	0.001 (S)
	1501-3000	490 (53.7)	322 (35.3)	101 (11.0)		
	3001 to 8000	585 (58.1)	322 (31.9)	101 (10.0)		
	More than 8001	438 (57.4)	248 (32.5)	77 (10.1)		

The data presented in table 4.7f depicts the association between demographic variables and knowledge about drug abuse. According to majority of the respondents from Kashipur (67.7%) and Rudrapur (65.5%) the commonly used drug substances are cigarettes, alcohol and cannabis. As per the knowledge of 37.8% and 37.1% of the respondents from Jaspur and Sitarganj respectively intoxicated chewing gum, tablets and power is another type of drug substance which is used quiet often. Injection or drug consumption is reported by small percentage of respondents i.e. 12.0% from Kichha and 9.9% from Rudrapur. The difference was found to be significant. According to a study conducted by the National Commission for Protection of Child Rights, also found that the common drugs of abuse among children and adolescents are tobacco and alcohol, followed by inhalants and cannabis. The mean age of onset was lowest for tobacco (12.3 years), followed by onset of inhalants (12.4 years), cannabis (13.4 years), alcohol (13.6 years), proceeding then to the use of harder substances – opium, pharmaceutical opioids, heroin (14.3–14.9 years) and then substances through injecting route (15.1 years) (Tikoo et.al.,2013). In another study, 46.36% of slum dwelling adolescents used both smokeless and smoking tobacco in addition to alcohol and cannabis and started using drugs during their childhood itself (Sharma & Chaudhary 2016). A high percentage of adolescents in Assam were found using alcoholic drinks with a male preponderance. They begin taking alcoholic drinks at a very young age with parents' indulgence in tobacco, alcohol, or both (Mahanta et.al.,2016).

The data related to gender depicted that majority of the girl's respondents (71.3%) had knowledge about cigarettes, alcohol and cannabis as drug substances in comparison to their counterparts. Maximum percentage of male respondents had knowledge about intoxicants chewing gums, tablet and powder (39.0%) followed by injection or drug (12.3%) in comparison to female respondents. As per the religion above ninety percent of the respondents from Punjabi families (96.9%) had knowledge about cigarettes, alcohol and cannabis followed by more than fifty percent of the respondents from Hindu (61.9%) and Muslim (57.4%) families respectively. More than thirty percent of the respondents from Muslim families (32.8%) had information about intoxicated chewing gum, tablets and powder. A small percentage of respondents (3.1%) from Punjabi families had awareness about injection or drug. The difference was found to be statistically significant representing that gender and religion has influence on the knowledge

regarding drug substances while type of family and age were found to have no association with knowledge regarding drug substances.

The maximum percentage of respondents whose fathers were educated upto ITI (66.7%) or Primary level (66.5%) had knowledge of cigarettes, alcohol, and cannabis. All the respondents (100%) whose fathers had done MBA followed by 53.2% of the respondents whose father had done masters had awareness about drug substances in form of intoxicated chewing gum, tablets and powder. About 20.3% and 17.0% of the respondents whose fathers were education upto graduation and masters respectively had knowledge regarding injection or drugs. As far as mothers education is concerned, the majority of the respondents (68.6%) whose mothers were educated upto primary level (68.6%) followed by B.A (63.6%) had knowledge about cigarettes, alcohol and cannabis. Information about intoxicated chewing gum, tablets and powder was reported by around 34.1% and 29.7% of the respondents whose mothers were educated upto B.A. or either uneducated respectively. A small percentage of respondents had knowledge regarding injection or drugs i.e. 11.1 percent and 9.2 percent of the respondents whose mothers were educated upto intermediate level or uneducated. The difference was found to be significant.

Data gathered regarding parental occupation reveals that majority of the respondents, whose fathers were working as labour (64.5%) and farmer (59.9%) had knowledge regarding cigarettes, alcohol and cannabis as main source of substance use. The awareness regarding intoxicated chewing gum, tablets and powder was quoted by 43.3% and 35.5% of the respondents whose fathers were running their own business and were engaged in services respectively. Information about injection and drugs was reported by 32.9 percent of those respondents whose fathers were unemployed. Further, data related to mothers' occupation portray that equal percentage of respondents (66.7%) whose mothers were engaged in jobs or running their own business had knowledge regarding cigarettes, alcohol and cannabis as major form of substance abuse. An equal percentage of respondents (33.3%) whose mothers were employed as farmer or in services had awareness about intoxicated chewing gum, tablets and powder. Around 22.2% of the respondents whose mothers were running their own business followed by those respondents whose mothers were working as labour (15.1%) had knowledge about injection or drugs. The difference was found to be statistically significant.

The data pertaining to family income of the respondents reveal that majority of the respondents (65.8%) whose family income was less than 1500 shared that they had knowledge about cigarettes, alcohol and cannabis as major form of drug substances followed by 58.1% of respondents who had family income between 3000 to 8000. A small percentage of respondents (11.0%) whose family income was between 1500 to 3000 had knowledge about injection or drugs. About 35.3% of respondents whose family income was between 1500 to 3000 had knowledge about intoxicated chewing gums, tablets and powder. The difference was found to be significant.

Therefore, the table can be summed up describing that age and type of family was not found to be associated with knowledge regarding drug substances while locale, gender, religion, family income, parental education and occupation was found to be significantly associated with knowledge regarding drug substances.

Data in table 4.7g elucidates the various reasons of using drugs. Maximum percentage of respondents from Rudrapur (38.4%) and Kichha (38.1%) revealed that youths take drugs to get rid of physical, psychological problems besides this some even don't have information about side-effects of intoxications. A study conducted in Iran also supports the present research findings. It was found that Rejections from friends, family relationships, loss of respect and occupation are included among the problems that can cause individuals to be addicted (Mahnaz et.al, 2016)

Almost equal percentage of respondents from Jaspur (33.5%) and Sitarganj (33.1%) attributed teenage curiosity, thrill, provoking by friends as the most common reason for consuming drugs. Daily problems, family problems and strict behaviour of parents compels youth to consume drugs as reported by 20.6% of respondents from Kichha and 20.1% of respondents from Gadarpur. The present research result was supported by Hojati et.al,2010 study who found that weakness in the family performance, problems, conflicts and family struggles are one of the major causes of drug addiction.

Table 4.7g: Association between demographic Variables and reason of using drugs

Variables		Reason of Using drugs						
		Teenage curiosity, Thrill, Provoked by friends f (%)	**Get rid of physical disease,Psychological problem, lack of self-confidence, no information about side effects of intoxications f (%)**	**Daily Problems, separation of parents, Domestic fights, strict behaviour of parents f (%)**	**Unavailability of other medium of entertainment f (%)**	**Easy Availability of cheap toxicants or free time, unavailability of drug de-addiction centre and presence of family member with drug abuse f (%)**	**Chi^2**	**p-value**
Block	Gadarpur	184 (25.9)	270 (37.9)	143 (20.1)	24 (3.4)	90 (12.7)	36.6	0.01 (S)
	Jaspur	237 (33.5)	246 (34.8)	132 (18.7)	27 (3.8)	65 (9.2)		
	Kashipur	214 (29.6)	256 (35.5)	140 (19.4)	31 (4.3)	81 (11.2)		
	Kichha	171 (24.2)	269 (38.1)	146 (20.6)	32 (4.5)	89 (12.6)		
	Rudrapur	185 (27.1)	262 (38.4)	117 (17.1)	25 (3.7)	94 (13.7)		
	Sitarganj	232 (33.1)	245 (35.0)	131 (18.7)	28 (4.0)	64 (9.2)		
Gender	Female	711 (32.9)	`903 (41.8)	304 (14.1)	51 (2.4)	190 (8.8)	170.8	0.001 (S)
	Male	512 (24.7)	645 (31.1)	505 (24.4)	116 (5.6)	293 (14.2)		

Religion	Hindu	722 (30.2)	850 (35.6)	415 (17.4)	118 (4.9)	285 (11.9)	38.3	0.001 (S)
	Muslim	487 (26.9)	683 (37.8)	393 (21.7)	48 (2.7)	196 (10.9)		
	Punjabi	14 (42.4)	15 (45.5)	1 (3.0)	1 (3.0)	2 (6.1)		
Fathers Education	Graduation	25 (39.0)	28 (43.8)	8 (12.5)	2 (3.1)	1 (1.6)	88.0	0.001 (S)
	ITI	0 (0.0)	0 (0.0)	2 (66.7)	0 (0.0)	1 (33.3)		
	MBA	3 (75.0)	0 (0.0)	0 (0.0)	0 (0.0)	1 (25.0)		
	Master	12 (25.6)	15 (31.9)	16 (34.0)	0 (0.0)	4 (8.5)		
	Primary	159 (22.7)	330 (47.1)	100 (14.3)	34 (4.8)	78 (11.1)		
	Six to Intermediate	473 (32.1)	493 (33.4)	301 (20.4)	57 (3.9)	151 (10.2)		
	Uneducated	343 (27.8)	444 (35.9)	251 (20.3)	41 (3.3)	157 (12.7)		
Mothers Education	BA	41 (46.6)	15 (17.1)	23 (26.1)	2 (2.3)	7 (7.9)	54.8	0.001 (S)
	Primary	117 (26.8)	184 (42.2)	70 (16.1)	25 (5.7)	40 (9.2)		
	Uneducated	540 (26.1)	818 (39.6)	373 (18.1)	81 (3.9)	253 (12.3)		
	Six to Intermediate	282 (32.7)	285 (33.1)	174 (20.2)	27 (3.1)	94 (10.9)		
Type of Family	Joint	292 (27.9)	367 (35.1)	208 (19.9)	52 (4.9)	127 (12.2)	6.0	0.19 (NS)
	Single/Nuclear	931 (29.2)	1181 (37.1)	601 (18.9)	115 (3.6)	356 (11.2)		
	Business	145	172	89	15	51	51.7	0.001

		(30.7)	(36.4)	(18.9)	(3.2)	(10.8)		(S)
Fathers Occupation	Farmer	169 (30.1)	199 (35.4)	104 (18.5)	21 (3.7)	69 (12.3)		
	Labour	761 (28.4)	1014 (37.8)	537 (20.0)	101 (3.7)	271 (10.1)		
	Service	120 (27.3)	145 (33.0)	75 (17.1)	25 (5.7)	74 (16.9)		
	Unemployed	28 (38.4)	18 (24.7)	4 (5.5)	5 (6.8)	18 (24.6)		
Mothers Occupation	Business	1 (11.1)	1 (11.1)	1 (11.1)	4 (44.5)	2 (22.2)	61.9	0.001 (S)
	Farmer	5 (16.7)	12 (40.0)	3 (10.0)	2 (6.7)	8 (26.6)		
	Housewife	1109 (29.3)	1383 (36.6)	732 (19.4)	147 (3.9)	410 (10.8)		
	Labour	105 (25.9)	150 (37.2)	73 (18.1)	14 (3.4)	62 (15.4)		
	Service	3 (50.0)	2 (33.3)	0 (0.0)	0 (0.0)	1 (16.7)		
Age	< or = 14 yrs	658 (30.4)	855 (39.5)	343 (15.8)	92 (4.2)	218 (10.1)	46.5	0.01 (S)
	>14 yrs.	565 (27.4)	693 (33.6)	466 (22.6)	75 (3.6)	265 (12.8)		
Income	< 1500	229 (24.8)	435 (47.1)	148 (16.1)	29 (3.1)	83 (8.9)	70.0	0.001 (S)
	1501-3000	278 (30.5)	310 (33.9)	166 (18.2)	41 (4.5)	118 (12.9)		
	3001- 8000	282 (27.9)	339 (33.6)	225 (22.4)	42 (4.2)	120 (11.9)		
	>8001	253 (33.2)	236 (30.9)	147 (19.3)	34 (4.5)	93 (12.1)		

In present study it was also found that 13.7% and 12.7% of respondents from Rudrapur and Gadarpur respectively highlighted that easy availability of cheap drugs, family member with habit of drug consumption, non-availability of de-addiction centre and free time forces youth to consume drugs. Unavailability of other medium of entertainment is another reason of using drugs quoted by small percentage of respondents from Kashipur (4.3%) and Kichha (4.5%). As per the gender, majority of the female respondents (41.8%) reported that the main cause behind drug use is to get rid of physical disease, psychological problem, lack of self-confidence and no information about side-effects of intoxications followed by teenage curiosity, thrill, provoked by friends (32.9%). The maximum percentage of males attributed the reason for drug abuse to problems in lives of youth related to personal and family (24.4%), followed by 14.2% of respondents who believed that easy availability and cheap drugs, free time, unavailability of de-addiction centre, presence of family member with drug abuse are some of the causes that contribute towards drug consumption. Unavailability of other medium of entertainment is the reason given by 5.6% of the male respondents. Further probing into the table, the data related to religion furnish the information that maximum percentage of respondents (42.4%) from Punjabi families credited the foremost cause of drug use is teenage curiosity, thrill, provoking by friends followed by to get rid of physical disease, psychological problem, lack of self-confidence, no information about side-effects of intoxicants. Daily problems, separation of parents, domestic fights, and strict behaviour of parents are some of the root causes that make youths to consume drugs as reported by 21.7% of the respondents who belonged to Muslim families. 11.9 percent and 4.9 percent of respondents from Hindu families recognised availability of cheap toxicants, lack of de-addiction centre and family member with habit of drug addiction as the cause of drug abuse followed by unavailability of other medium of entertainment. The difference was found to be significant inferring that locale, gender and religion has association with reason of drug use.

Majority of the respondents whose fathers had done MBA (75.0%) and mothers educated upto B.A. (46.6%) credited the cause of drug use to teenage curiosity, thrill and provoking by friends. More than half of the respondents whose father had done ITI (66.7%) while only 26.1% of the respondents whose mothers had done B.A. asserted that daily problems, separation of parents, domestic fights and strict behaviour of parents are some of the issues that push youth towards the black world of drugs. Less than half of the respondents whose fathers (47.1%) and mothers (42.2%) were educated upto primary level stated that youth consume drugs because they want to get rid of physical diseases, psychological problems, lack of self-confidence and no information about side-effects of intoxications. A very small percentage of respondents' whose

fathers and mothers had done graduation emphasized that unavailability of other medium of entertainment followed by easy availability of cheap toxicants, free time, unavailability of drug de-addiction centre and presence of family member with drug abuse are some of the basis which act as a driving force for the youths to consume drugs. Statistically, the difference was found to be significant.

Statistically, the type of family was not found to be associated with reason of drug use.

Data associated with parental occupation illustrates that maximum percentage of respondents whose fathers were unemployed (38.4%) and running their own business (30.7%) pointed that the reason for drug abuse among youths is teenage curiosity, thrill and provoking by friends. About 37.8% and 36.4% of the respondents whose fathers were employed as labour or had their own business respectively mentioned that youths consume drugs in order to get rid of physical diseases, psychological problems, lack of self-confidence and no information about side-effects of intoxications. Daily problems, separation of parents, domestic fights, strict behaviour of parents were some of the reason that compels youth to consume drugs is quoted by around 20.0% and 18.9% of the respondents whose fathers were employed as labour or running their own business. Children of unemployed father i.e. 24.6% and 6.8% referred easy availability of cheap drugs, free time, unavailability of de-addiction centre and drug addict family member followed by unavailability of other medium of entertainment as some of the reasons behind drug abuse.

Fifty percent of the respondents whose mothers were engaged in services followed by 29.3% of the respondents whose mothers were housewives shared their views revealing that the reason for drug abuse among youths is teenage curiosity, thrill and provoking by friends. According to 40.0% and 37.2% of the respondents whose mothers were engaged as farmer and labour respectively perceived that youths consume drugs in order to get rid of physical diseases, psychological problems, lack of self-confidence and no information about side-effects of intoxications. Daily problems, separation of parents, domestic fights, strict behaviour of parents were some of the reason that pushes youth towards drugs is mentioned by around 19.4% and 18.1% of the respondents whose mothers were housewives and labour respectively. Children of those mothers who were running their own business (44.4%) remarked that youth consume drugs when they fail to get other medium of entertainment. Around 26.6% and 22.2% of the respondents whose mothers was engaged in farming referred and running their own business respectively believed that easy availability of cheap drugs, free time, unavailability of de-

addiction centre and drug addict family member as some of the causes for drug abuse. The difference was found to be significant.

The obtained data regarding age reveals that 39.5% and 30.4% of the respondents whose age was less than 14 years quoted that according to them youths consume drugs in order to get rid of physical diseases, psychological problems, lack of self-confidence and no information about side-effects of intoxications followed by teenage curiosity, thrill and provoking by friends. The respondents whose age was more than 14 years attributed the reason behind drug abuse to daily problems, separation of parents, domestic fights, and strict behaviour of parents (22.6%) followed by easy availability of cheap drugs, free time, unavailability of de-addiction centre and drug addict family member (12.8%). A very small percentage of respondents i.e. 4.2% whose age was less than 14 years attributed the cause of drug abuse to unavailability of other medium of entertainment.

Further, the data related to income of the respondents depict that the respondents whose income was more than 8000 quoted teenage curiosity, thrill and provoking by friends (33.2%) followed by easy availability of cheap drugs, free time, unavailability of de-addiction centre and drug addict family member as the grounds (12.1%) for intake of drugs among youths. Likewise, 30.5% and 12.9% of the respondents whose income was between 1500 to 3000 attributed the similar reason for drug consumption. About 47.1% and 33.9% of the respondents whose income was less than 1500 and between 1500 to 3000 respectively mentioned that according to them youth take the recourse of drugs in order to get rid of physical diseases, psychological problems besides this when they lack of self-confidence and had no one to give them correct information about side-effects of intoxications. Daily problems, separation of parents, domestic fights, and strict behaviour of parents were some of the reasons that were associated with drug consumption by 22.4% and 19.3% of the respondents whose family income was between 3000 to 8000 and more than 8000 respectively. A small percentage of respondents (4.5%) whose income was between 1500 to 3000 and more than 8000 stated that the unavailability of other medium of entertainment push youth towards drugs.

Thus, it can be concluded that only type of family was not found to be associated with reason of using drugs while all other demographic variables were found to be associated with reason of using drugs.

The above findings were supported by a study conducted by Pourallahvirdi et.al.,in 2016 found that among the male population, the most common causes of tendency towards drugs with the very poor influence severity were obtaining a new experience (51.8%), learning from family members (43%), and getting more energy (30.7%), respectively. The most common causes of tendency towards the drugs with the severe influence severity on the male population were failure in life (35.7%), escape from problems (32%), and staying awake (30.3%), respectively. Whereas in females positive attitude to drugs (37.8%), learning from family members, and friends' insistence (35.1%), respectively. The most common causes of tendency towards drugs in female population with severe influence severity were failure in life (83.8%), entertainment and recreation (64.9 %), and relaxation (64.9%), respectively. Failure in life was the strongest cause of tendency towards drugs among both studied female and male populations.

SECTION 8: KNOWLEDGE AND VIEWS ON CHILD MARRIAGE

Child marriage violates children's rights and places them at high risk of violence, exploitation, and abuse. Child marriage affects both girls and boys, but it affects girls disproportionately. It is defined as a marriage of a girl or boy before the age of 18 and refers to both formal marriages and informal unions in which children under the age of 18 live with a partner as if married.

Child marriage ends childhood. It negatively influences children's rights to education, health and protection. These consequences impact not just the girl directly, but also her family and community. A girl who is married as a child is more likely to be out of school and not earn money and contribute to the community. She is more likely to experience domestic violence and become infected with HIV/AIDS. She is more likely to have children when she is still a child. There are more chances of her dying due to complications during pregnancy and childbirth.

Even After knowing the consequences of child marriage people are still practicing this social evil continuously. Estimates suggest that each year, at least 1.5 million girls under 18 get married in India, which makes it home to the largest number of child brides in the world - accounting for a third of the global total. Nearly 16 per cent adolescent girls aged 15-19 are currently married. While the prevalence of girls getting married before age 18 has declined from 47 per cent to 27 per cent between 2005-2006 and 2015-2016 it is still too high. Present study was planned to know the views of adolescents on this social evil and educate them about their rights of marriage and consequences related to child marriage.

Table 4.8a: Association between demographic variables (Locale and Religion) and views on child marriage

S.No.	Question		Block						Religion			Total respondents N=4230
			G f (%)	J f (%)	Ka f (%)	Ki f (%)	R f (%)	S f (%)	H f (%)	M f (%)	P f (%)	
1.	What is child marriage	Boys and girls are less than18 years at the time of marriage	211 (29.6)	190 (26.8)	170 (23.5)	181 (25.6)	205 (30.0)	192 (27.5)	654 (27.3)	481 (26.6)	14 (42.4)	1149 (27.1)
		Boys are less than 21 years and girls are less than 18 years	173 (24.4)	168 (23.8)	183 (25.3)	188 (26.6)	163 (23.9)	179 (25.5)	646 (27.2)	403 (22.4)	5 (15.1)	1054 (24.9)
		At the time of marriage both are less than 21 years	146 (20.5)	174 (24.7)	143 (19.8)	163 (23.0)	141 (20.7)	157 (22.5)	425 (17.7)	493 (27.2)	6 (18.2)	924 (21.9)
		At the time of marriage both are less than 15 yrs.	181 (25.5)	175 (24.7)	226 (31.4)	175 (24.8)	174 (25.4)	172 (24.5)	665 (27.8)	430 (23.8)	8 (24.3)	1103 (26.1)
Chi^2			24.36						62.7			
p-value			0.06 (NS)						0.001 (S)			
2.	Child marriage is Correct	Yes	84 (11.8)	128 (18.1)	93 (12.8)	134 (18.9)	87 (12.8)	124 (17.7)	299 (12.5)	350 (19.4)	1 (3.1)	650 (15.4)
		No	497 (69.9)	463 (65.4)	533 (73.8)	455 (64.4)	467 (68.4)	451 (64.4)	1653 (69.1)	1181 (65.4)	32 (96.9)	2866 (67.8)
		Depends on Situation	130 (18.3)	116 (16.5)	96 (13.4)	118 (16.7)	129 (18.8)	125 (17.9)	438 (18.4)	276 (15.2)	0 (0.0)	714 (16.8)
Chi^2			39.4						52.4			
p-value			0.001 (S)						0.001 (S)			
3.	Correct age of marriage for girls	1.15 to 18 years	134 (18.8)	132 (18.7)	130 (18.1)	129 (18.2)	120 (17.6)	132 (18.8)	398 (16.6)	374 (20.7)	5 (15.1)	777 (18.3)
		19-25 years	414 (58.2)	352 (49.8)	392 (54.3)	358 (50.6)	405 (59.3)	345 (49.2)	1296 (54.2)	947 (52.4)	23 (69.8)	2266 (53.7)
		26-30 years	96 (13.5)	122 (17.3)	128 (17.7)	119 (16.8)	90 (13.2)	133 (19.2)	408 (17.1)	276 (15.2)	4(12.1)	688 (16.2)
		After 30 years	67 (9.5)	101 (14.2)	72 (9.9)	101 (14.2)	68 (9.9)	90 (12.8)	288 (12.1)	210 (11.7)	1 (3.0)	499 (11.8)

Chi^2			40.6						16.32			
p-value			0.001 (S)						0.012 (S)			
4.	Correct age of marriage for Boys	1.15 to 18 years	85 (11.9)	118 (16.6)	90 (12.5)	119 (16.8)	84 (12.4)	119 (17.0)	340 (14.2)	274 (15.2)	1 (3.0)	615 (14.5)
		19-25 years	336 (47.2)	303 (42.9)	355 (49.2)	328 (46.4)	322 (47.1)	308 (44.0)	1095 (45.8)	846 (46.8)	11 (33.3)	1952 (46.2)
		26-30 years	258 (36.3)	239 (33.9)	231 (31.9)	247 (34.9)	246 (36.0)	235 (33.5)	814 (34.1)	622 (34.4)	20 (60.7)	1456 (34.4)
		After 30 years	32 (4.6)	47 (6.6)	46 (6.4)	13 (1.9)	31 (4.5)	38 (5.5)	141 (5.9)	65 (3.6)	1 (3.0)	207 (4.9)
Chi^2			44.31						23.1			
p-value			0.001 (S)						0.001 (S)			
5.	Negative consequences of child marriage	Taking more responsibilities in early age	311 (43.7)	270 (38.2)	362 (50.1)	251 (35.5)	305 (44.6)	261 (37.2)	1046 (43.7)	700 (38.7)	14 (42.5)	1760 (41.6)
		Facing health related consequences	75 (10.5)	82 (11.7)	82 (11.3)	82 (11.6)	63 (9.2)	90 (12.9)	271 (11.3)	201 (11.2)	2 (6.0)	474 (11.2)
		Break up of marriage due to lack of reconciliation	38 (5.4)	55 (7.8)	22 (3.0)	53 (7.5)	43 (6.4)	49 (7.0)	142 (5.9)	118 (6.5)	0 (0.0)	260 (6.1)
		Interruption in studies	57 (8.0)	72 (10.2)	39 (5.4)	62 (8.8)	53 (7.8)	72 (10.3)	200 (8.4)	150 (8.4)	5 (15.2)	355 (8.4)
		Less chance of employment	34 (4.8)	36 (5.0)	26 (3.6)	42 (5.9)	35 (5.1)	37 (5.3)	110 (4.7)	97 (5.4)	3 (9.0)	210 (4.9)
		Child rearing related problem	43 (6.0)	31 (4.3)	19 (2.6)	48 (6.8)	42 (6.2)	32 (4.6)	105 (4.4)	110 (6.0)	0 (0.0)	215 (5.1)
		Financial problems in family	42 (5.9)	44 (6.2)	39 (5.5)	57 (8.0)	36 (5.2)	46 (6.6)	126 (5.3)	137 (7.6)	1 (3.0)	264 (6.3)
		All of the above	111 (15.7)	117 (16.6)	133 (18.5)	112 (15.9)	106 (15.5)	113 (16.1)	390 (16.3)	294 (16.2)	8 (24.3)	692 (16.4)
Chi^2			92.15						31.99			
p-value			0.001 (S)						0.004 (S)			
6.	Child	Yes	370	326	308	355	358	316	1114	912	7	2033

	marriage is more permanent than normal marriage		(52.0)	(46.1)	(42.6)	(50.2)	(52.4)	(45.1)	(46.6)	(50.4)	(21.2)	(48.1)
Chi^2			22.91						15.74			
p-value			0.001(S)						0.001 (S)			
7.	You know someone who is happy with child marriage	Yes	168 (23.6)	166 (23.4)	198 (27.4)	214 (30.2)	177 (25.9)	162 (23.1)	591 (24.7)	493 (27.2)	1 (3.0)	1085 (25.7)
Chi^2			14.70						12.44			
p-value			0.01 (S)						0.002 (S)			
8.	Reason of child marriage	Tradition and Custom	399 (56.1)	312 (44.1)	424 (58.7)	352 (49.8)	384 (56.3)	296 (42.3)	1202 (50.3)	941 (52.0)	24 (72.7)	2167 (51.2)
		Illiteracy	189 (26.6)	259 (36.6)	184 (25.5)	239 (33.8)	176 (25.8)	257 (36.7)	752 (31.5)	547 (30.3)	5 (15.2)	1304 (30.8)
		Security of girls	73 (10.3)	76 (10.8)	65 (9.0)	73 (10.3)	75 (10.9)	79 (11.3)	238 (9.9)	200 (11.1)	3 (9.1)	441 (10.4)
		Absence of father in family.	50 (7.0)	60 (8.5)	49 (6.8)	43 (6.1)	48 (7.0)	68 (9.7)	198 (8.3)	119 (6.6)	1 (3.0)	318 (7.6)
Chi^2			77.34						12.87			
p-value			0.001 (S)						0.04 (S)			
9.	Knowledge of laws against child marriage	Yes	519 (73.0)	466 (65.9)	490 (67.8)	493 (69.7)	504 (73.7)	457 (65.2)	1713 (71.6)	1186 (65.6)	30 (90.9)	2929 (69.2)
Chi^2			20.88						24.95			
p-value			0.001 (S)						0.001 (S)			

G- Gadarpur, J- Jaspur, Ka- Kashipur, Ki- Kichha, R- Rudrapur, S- Sitarganj, H- Hindu,

M-Muslim, P-Punjabi

The gathered data related to child marriage depicts the overall views of the respondents. 1149 respondents out of 4230 respondents revealed that as per their views a marriage is considered child marriage if both boys and girls are less than 18 years at the time of marriage. Maximum percentage of respondents (67.8%) described that child marriage is not correct. More than half of the respondents (53.7%) explained that correct age of marriage for girls is 19-25 years while on the other hand less than half of the respondents (46.2%) reported that the correct age of marriage for boys is 19-25 years followed by 26-30 years (34.4%). The major negative consequence of child marriage is taking more responsibilities in early age was highlighted by 41.6% of the respondents. Less than half of the respondents (48.1%) revealed that child marriage is more permanent than normal marriage. Only 25.7% of the respondents mentioned that they know someone who is happy with child marriage while rest of the samples denied. The foremost region for child marriage which was quoted by 51.2% of the respondents was traditions and customs followed by illiteracy (30.8%). Majority of the respondents (69.2%) pointed out that they have knowledge of laws against child marriage while left out samples had no knowledge.

It is clear from the above finding that even after knowing the correct age of child marriage India is still the home to largest number of child brides, according to the UN Population Fund in 2012. Nearly 27 per cent women aged 20-24 years were married before attaining 18 years of age. The prevalence of female child marriage, however, declined by 20 per cent in the past 10 years, according to the International Institute for Population Sciences and ICF International Inc in 2017.

The data illustrated in Table 7a reveals the association between demographic variables (Locale and Religion) and views on child marriage. Locale was found to be non-significantly associated with information about correct age of child marriage. Maximum percentage of respondents (42.4%) who belonged to Punjabi families described that a marriage is considered child marriage when boys and girls are less than 18 years at the time of marriage followed by 27.3% of the respondents from Hindu families. According to 27.8% of the respondents from Hindu families marriage is considered to be a child marriage if at the time of marriage both boys and girls are less than 15 years. At the time of marriage when both boys and girls are less than 21 years the marriage is called child marriage is reported by 27.2% and 18.2% of the respondents who belonged to Muslim families and Punjabi families respectively. About 27.2% and 22.4% of

the respondents who belonged to Hindu and Muslim religion respectively explained that child marriage is one where the boys are less than 21 years and girls are less than 18 years. The difference was found to be significant.

Majority of the respondents who lived in Kashipur (73.8%) and Gadarpur (69.9%) stated that child marriage is not correct. Almost equal percentage of respondents from Kichha (18.9%) and Rudrapur (18.8%) differed in their views as former respondents supported child marriage while later specified that it depends on the situation. Likewise 18.2% of the respondents from Gadarpur mentioned that it depends on the situation while 18.1% of the respondents from Jaspur regarded that child marriage is correct. Child marriage is not correct was asserted by 96.9% of the respondents who followed Punjabi religion followed by 69.1% of the respondents from Hindu religion. According to 18.4% and 15.2% of the respondents from Hindu and Muslim religion respectively illustrated that child marriage is correct or not it depends on the situation. Child marriage is correct was specified by 19.4% of the respondents from Muslim religion followed by 12.5% of the respondents from Hindu religion. Statistically, the difference was found to be highly significant.

Majority of the respondents from Rudrapur (59.3%) and Gadarpur (58.2%) reported that the correct age of marriage for girls is 19 to 25 years. Correct age of marriage for girls is between 1.15 to 18years was specified by equal percentage of respondents from Gadarpur and Sitarganj i.e. 18.8% followed by respondents from Jaspur (18.7%). About 19.2% and 17.7% of the respondents from Sitarganj and Kashipur reported that 26 to 30 years is the correct age of marriage for girls. Marriage after 30 years was supported by respondents from Jaspur (14.2%), Kichha (14.2%) and Sitarganj (12.8%). The correct age of marriage for girls is 19-25 years was described by majority of the respondents who belonged to Punjabi religion (69.8%) followed by respondents who belonged to Hindu religion (54.2%). According to 20.7% and 16.6% of the respondents from Muslim and Hindu religion respectively the correct age of marriage for girls is 1.15 to 18 years. Around 17.1% and 15.2% of the respondents from Hindu and Muslim religion respectively highlighted that 26 to 30 years is the correct age for girls to get married Marriage of girls after 30years was supported by very small percentage of respondents i.e. 12.1% and 11.7% of the respondents who followed Hindu and Muslim religion respectively. The difference was found to be highly significant.

Maximum percentage of the respondents from Kashipur, Gadarpur and Rudrapur i.e. 49.2%, 47.2% and 47.1% respectively stated that for boys 19 to 25 years is the correct age for marriage. Almost equal percentage of respondents i.e. 36.3% and 36.0% of the respondents from Gadarpur and Rudrapur respectively specified that the correct age of marriage for boys is 26-30 years. Correct age of marriage for boys i.e. 1.15 to 18 years was mentioned by respondents from Sitarganj (17.0%) and Kichha (16.8%). A small percentage of respondents i.e. 6.6% from Jaspur and 6.4% from Kashipur quoted that marriage after 30 years is the best age for boys. 26 to 30 years is the correct age of marriage was supported by majority of the respondents i.e. 60.7% and 34.4% of the respondents from Punjabi and Muslim religion respectively. According to 46.8% and 45.8% of the respondents from Muslim and Hindu religion the correct age of marriage for boys is 19 to 25 years. 15.2% of Muslim respondents followed by 14.2% of the Hindu respondents believed that 1.15 to 18 years is the correct age of marriage for boys. Marriage after the age of 30 years was supported by 5.9% and 3.6% of the respondents from Hindu and Muslim religion respectively. The difference was found to be statistically significant.

Maximum percentage of respondents i.e. 50.1% from Kashipur and 44.6% from Rudrapur reported that the negative consequences of child marriage are taking more responsibilities in early age. Around 18.5% of the respondents from Kashipur and 16.6% from Jaspur described that all the negative consequences mentioned regarding the child marriage are convincing. Child marriage has many health related consequences as expressed by 12.9% of respondents from Sitarganj followed by almost equal percentage of respondents from Jaspur (11.7%), Kichha (11.6%) and Kashipur (11.3%). Child marriage leads to interruption in studies as revealed by almost equal percentage of respondents from Sitarganj and Jaspur i.e. 10.3% and 10.2%. Around 8.0%, 6.8% and 5.9% of respondents from Kichha highlighted that child marriage cause financial problems, child rearing related problems and causes less chance of employment respectively. Breakup of marriage due to lack of reconciliation was highlighted by 7.8% of the respondents from Jaspur.

Many studies were conducted to find out the consequences of child marriage but the study conducted by Lal, B.S., in 2015 found that majority of girls who were married below 18 year are from poor and below poverty line (BPL) families. Nearly 80 percent girls are facing the domestic violence (beaten, slapped or threatened), health problems. Most of the girls who are married before 18 year are likely to get pregnancy problems and there were death case reported.

Girls younger than 15 are five times more likely to die in child birth than women in their 20s. The age group below 18 year has high fertility. Child brides often show signs symptomatic of sexual abuse and post-traumatic stress such as feelings of hopelessness, helplessness and severe depression.

Maximum percentage of respondents from Hindu (43.7%) and Punjabi (42.5%) religion believed that child marriage compels to take more responsibilities in early age and it is its one of the major consequence. 24.3% of the respondents from Punjabi religion followed by 16.3% and 16.2% from Hindu and Muslim religion respectively asserted that their views on negative consequences of child marriage are concurrent with all the specified consequences. Almost equal percentage of respondents i.e. 11.3% and 11.2% of the respondents from Hindu and Muslim religion respectively stated that the negative consequence of child marriage is to face health related consequences. Around 15.2% and 9.0% of the respondents who follow Punjabi religion mentioned that child marriage cause interruption in studies and leads to less chances of employment respectively. Financial problems in family, breakup of marriage due to lack of reconciliation and child rearing related problems are the negatives consequences of child marriage as specified by 7.6%, 6.5% and 6.0% of the respondents who followed Muslim religion. Statistically, the difference was found to be highly significant.

More than half of the respondents from Rudrapur (52.4%) expressed that child marriage is more permanent than normal marriage followed by the 52.0% and 50.2% of the respondents from Gadarpur and Kichha respectively. As per the religion, 50.4% and 46.6% of the respondents who were following Muslim and Hindu religion respectively mentioned that according to them child marriage is more permanent than normal marriage. Statistically, the difference was found to be highly significant.

30.2% and 27.4% of the respondents from Kichha and Kashipur stated that they have some knows who are happy with child marriage. Likewise, 27.2% and 24.7% of Muslim and Hindu respondents respectively revealed the same. The difference was found to be significant.

More than half of the respondents from Kashipur (58.7%), Rudrapur (56.3%) and Gadarpur (56.1%) quoted tradition and customs as the main reason of child marriage. About 36.7%, 36.6% and 33.8% of the respondents from Sitarganj, Jaspur and Kichha respectively mentioned illiteracy as the main cause of child marriage. Respondents from Sitarganj (11.3%),

Rudrapur (10.9%) and Jaspur (10.8%) perceived that the security of girls is the driving force for child marriage. A small percentage of respondents from Sitarganj and Jaspur i.e. 9.7% and 8.5% respectively believed that absence of father in family cause child marriage. Tradition and custom is the main reason of child marriage was stated by majority of the respondents (72.7%) who were following Punjabi religion followed by 52.0% of the respondents who were following Muslim Religion. About 31.5% and 30.3% of the respondents from Hindu and Muslim religion respectively highlighted illiteracy as the main reason for child marriage. Security of the girls lead to child marriage was perceived by 11.1% and 9.9% of the respondents from Muslim and Hindu Families respectively. According to 8.3% and 6.6% of the respondents from Hindu and Muslim families respectively believed that absence of father in family cause child marriage. The difference was found to be significant.

Almost equal percentage of respondents from Rudrapur (73.7%) and Gadarpur (73.0%) had knowledge of laws against child marriage followed by 69.7% of the respondents from Kichha (69.7%). Majority of the respondents (90.9%) who were following Punjabi religion followed by 71.6% of the respondents from Hindu religion had knowledge of laws against child marriage. The difference was found to be significant.

From the table it can be concluded that block was found to be significantly associated with views on child marriage except for information about age of child marriage while religion was found to be significantly associated with views on career counselling.

Table 4.8b: Association between demographic variables (Age and Gender) and views on child marriage

S.No.	Question		Age		Gender	
			Less than 14 years f (%)	More than 14 years f (%)	Female f (%)	Male f (%)
1.	What is child marriage	Boys and girls are less than18 years at the time of marriage	570 (26.4)	579 (28.1)	615 (28.4)	534 (25.8)
		Boys are less than 21 years and girls are less than 18 years	562 (25.9)	492 (23.9)	551 (25.6)	503 (24.2)
		At the time of marriage both are less than 21 years	500 (23.1)	424 (20.5)	348 (16.2)	576 (27.8)
		At the time of marriage both are less than 15 years.	534 (24.6)	569 (27.5)	645 (29.8)	458 (22.2)
Chi^2			9.62		94.06	
p-value			0.02 (S)		0.001 (S)	

2.	Child marriage is Correct	Yes	342 (15.8)	308 (14.9)	184 (8.5)	466 (22.5)
		No	1486 (68.6)	1380 (66.9)	1641 (76.0)	1225 (59.1)
		Depends on Situation	338 (15.6)	376 (18.2)	334 (15.5)	380 (18.4)
Chi^2			5.26		183.9	
p-value			0.07 (NS)		0.001 (S)	
3.	Correct age of marriage for girls	1.15 to 18 years	403 (18.6)	374 (18.2)	304 (14.1)	473 (22.9)
		19-25 years	1127 (52.1)	1139 (55.1)	1415 (65.5)	851 (41.1)
		26-30 years	373 (17.2)	315 (15.2)	245 (11.3)	443 (21.3)
		After 30 years	263 (12.1)	236 (11.5)	195 (9.1)	304 (14.7)
Chi^2			5.03		256.20	
p-value			0.16 (NS)		0.001 (S)	
4.	Correct age of marriage for Boys	1.15 to 18 years	327 (15.2)	288 (13.9)	176 (8.2)	439 (21.2)
		19-25 years	988 (45.6)	964 (46.8)	990 (45.8)	962 (46.4)
		26-30 years	739 (34.1)	717 (34.7)	849 (39.4)	607 (29.4)
		After 30 years	112 (5.1)	95 (4.6)	144 (6.6)	63 (3.0)
Chi^2			2.03		183.03	
p-value			0.56 (NS)		0.001 (S)	
5.	Negative consequences of child marriage	Taking more responsibilities in early age	903 (41.7)	857 (41.6)	1075 (49.8)	685 (33.0)
		Facing health related consequences	264 (12.2)	210 (10.2)	217 (10.1)	257 (12.5)
		Break up of marriage due to lack of reconciliation	154 (7.2)	106 (5.2)	123 (5.8)	137 (6.7)
		Interruption in studies	194 (8.9)	161 (7.8)	167 (7.7)	188 (9.0)
		Less chance of employment	102 (4.8)	108 (5.2)	43 (1.9)	167 (8.0)
		Child rearing related problem	107 (4.9)	108 (5.2)	54 (2.5)	161 (7.8)
		Financial problems in family	110 (5.0)	154 (7.4)	48 (2.2)	216 (10.5)
		All of the above	332 (15.3)	360 (17.4)	432 (20.0)	260 (12.5)
Chi^2			25.48		366.25	
p-value			0.001 (S)		0.001 (S)	
6.	Child marriage is	Yes	1057	976	965	1068

	permanent than normal marriage		(48.8)	(47.2)	(44.7)	(51.5)
Chi^2			0.96		20.00	
p-value			0.32 (NS)		0.001 (S)	
7.	You know someone who is happy with child marriage	Yes	572 (26.4)	513 (24.8)	289 (13.3)	796 (38.4)
Chi^2			1.33		347.7	
p-value			0.24 (NS)		0.001 (S)	
8.	Reason of child marriage	Tradition and Custom	1099 (50.7)	1068 (51.8)	980 (45.4)	1187 (57.3)
		Illiteracy	613 (28.3)	691 (33.5)	615 (28.4)	689 (33.3)
		Security of girls	256 (11.8)	185 (8.9)	322 (14.9)	119 (5.8)
		Absence of father in family.	198 (9.2)	120 (5.8)	242 (11.3)	76 (3.6)
Chi^2			33.23		202.3	
p-value			0.001 (S)		0.001 (S)	
9.	Knowledge of laws against child marriage	Yes	1440 (66.4)	1489 (72.1)	1676 (77.6)	1253 (60.5)
Chi^2			15.89		145.58	
p-value			0.001 (S)		0.001 (S)	

The captured data in Table 4.8b elucidates the association between demographic variables (Age and Gender) and views on child marriage. Maximum percentage of the respondents (28.1%) whose age was more than 14 years answered that when boys and girls are less than 18 years at the time of marriage it is considered child marriage whereas 27.5% of the respondents responded that a marriage is referred as child marriage when both boys and girls are less than 15 years at the time of marriage. About 25.9% of the respondents whose age was less than 14 years highlighted that if boys are less than 21 years and girls are less than 18 years, it is a child marriage while 23.1% of the respondents believed that a marriage is called child marriage when at the time of marriage both boys and girls are less than 21 years. Majority of the female respondents (29.8%) believed that the marriage is referred to as child marriage when both boys and girls are less than 15 years while 28.4% of the female respondents perceived that when both boys and girls are less than 18 years at the time of marriage, it is a child marriage. A marriage is considered child marriage if boys are less than 21 years and girls are less than 18 years was responded by 25.6% of the female respondents. Maximum percentage of males (27.8%) believed

that marriage is child marriage when at the time of marriage both boys and girls are less than 21 years. The difference was found to be highly significant.

It is clearly evident from the present study that maximum percentages of respondents were not aware about the correct age of marriage. The present finding is coincide with the findings of the study conducted by Pandey & Bhanderi (2015). They found that significantly higher proportion of women who had Child Marriage did not know the legal age of marriage compared to those without child marriage ($P < 0.01$). A study done among adolescents in Bangladesh revealed similar results where majority of them did not had correct knowledge about the legal age of marriage (Rahman & Kabir, 2005).

Age of the respondents was not found to be significantly associated with whether child marriage is correct or not, correct age of marriage for girls, correct age of marriage for boys, child marriage is more permanent than normal marriage and whether they know someone who is happy with child marriage.

Majority of the female respondents (76.0%) asserted that child marriage is not correct whereas 22.5% of the male respondents supported child marriage. 18.4% of the male respondents stated that it depends on the situation whether child marriage is correct or not. The difference was found to be statistically significant.

Majority of the female respondents (65.5%) specified that the correct age of marriage for girls is 19-25years. 1.15 to 18 years is the correct age of marriage was responded by 22.9% of the male respondents. Around 21.3% and 14.7% of the male respondents mentioned that 26-30 years and after 30 years respectively is the correct age of marriage for girls. Maximum percentage of male respondents (46.4%) expressed that 19-25 years is the correct age of marriage for boys whereas 39.4% of the females believed that 26 to 30 years is the correct age of marriage for boys. The correct age of marriage for boys is 1.15 to 18 years was mentioned by 21.2% of the male respondents. Marriage after the age of 30 years was supported by 6.6% of the female respondents. The difference was found to be significant.

Maximum but almost equal percentage of respondents whose age was less than (41.7%) and more than 14 years (41.6%) explained that the most negative consequence of child marriage is it forces to take more responsibilities in early age. About 17.7% of the respondents whose age was more than 14 years stated that as per their views all the mentioned consequences of child

marriage are suitable. Facing health related consequences was highlighted by 12.2% of the respondents whose age was less than 14 years. The 8.9% and 7.2% of the respondents whose age was less than 14 years believed that child marriage cause interruption in studies and lack of reconciliation in the marriage is prevalent that cause breakup of marriage. Financial problems, less chances of employment and child rearing related problems were specified by 7.4%, 5.2% and 5.2% of the respondents respectively whose age was more than 14 years. Majority of the females (49.8%) responded that child marriage compels to take more responsibilities at an early age. As per the views of 20.0% of the female respondents they felt that all the negatives consequences of child marriage are correct as per their knowledge and experience. Males mentioned that child marriage cause health problems (12.5%), financial problems (10.5%), interruption in studies (9.0%), less chance of employment (8.0%), child rearing related problems (7.8%) and lack of reconciliation that cause marriages to break (6.7%). The difference was found to be statistically significant.

More than half of the male respondents (51.5%) stated that according to them child marriages are more permanent than normal marriages whereas less than half of the females (44.7%) believed so. Statistically, the difference was found to be significant.

Maximum percentage of male respondents (38.4%) mentioned that they have knows who are happy with child marriage in comparison to 13.3% of the female respondents who responded so. The difference was found to be statistically significant.

Majority of the respondents (51.8%) whose age was more than 14 years mentioned that tradition and custom is the main reason behind child marriage followed by illiteracy (33.5%) in comparison to those whose age was less than 14 years. The respondents with age less than 14 years assumed that security of girls (11.8%) followed by absence of father in family (9.2%) is the driving force for child marriage. More than half of the male respondents (57.3%) quoted tradition and custom as the main reason for arranging child marriage. Similarly, Illiteracy is another major factor which causes child marriage as highlighted by 33.3% of the male respondents. 14.9% and 11.3% of the female respondents explained that security of girls and absence of father in family respectively lead to child marriages. Majority of the respondents (72.1%) whose age was more than 14 years had knowledge about laws against child marriages. Maximum percentage of female respondents (77.6%) was found to have knowledge about laws against child marriage. The difference was found to be statistically significant.

The overall data reflects the picture that age was found to be significantly associated with information about age of child marriage, negative consequences of child marriage, reason of child marriage and knowledge of laws against child marriage while it was found to be negatively associated with whether child marriage is correct or not, correct age of marriage for boys and girls, child marriage is more permanent than normal marriage and information about someone who is happy with child marriage. As far as gender is concerned it was found to be associated with views on child marriage.

Table 4.8c: Association between demographic variables (Family Income and Type of Family) and views on child marriage

S.No.	Questions		Family Income				Type of Family	
			<1500 f (%)	1500 to 3000 f (%)	3000 to 8000 f (%)	>8000 f (%)	Joint f (%)	Nuclear f (%)
1.	What is child marriage	Boys and girls are less than18 years at the time of marriage	292 (31.6)	293 (32.1)	219 (21.7)	208 (27.3)	291 (27.9)	858 (26.9)
		Boys are less than 21 years and girls are less than 18 years	247 (26.8)	165 (18.1)	283 (28.1)	180 (23.5)	224 (21.5)	830 (26.1)
		At the time of marriage both are less than 21 years	185 (20.0)	196 (21.5)	243 (24.1)	156 (20.5)	233 (22.2)	691 (21.7)
		At the time of marriage both are less than 15 years.	200 (21.6)	259 (28.3)	263 (26.1)	219 (28.7)	298 (28.4)	805 (25.3)
Chi^2			62.2				10.28	
p-value			0.001 (S)				0.01 (S)	
2.	Child marriage is Correct	Yes	97 (10.5)	154 (16.8)	168 (16.6)	139 (18.2)	141 (13.4)	509 (15.9)
		No	694 (75.2)	588 (64.4)	640 (63.5)	518 (67.9)	693 (66.3)	2173 (68.4)
		Depends on Situation	133 (14.3)	171 (18.8)	200 (19.9)	106 (13.9)	212 (20.3)	502 (15.7)
Chi^2			46.66				13.1	
p-value			0.001 (S)				0.001 (S)	
3.	Correct age of marriage for girls	1.15 to 18 years	154 (16.6)	181 (19.8)	212 (21.1)	127 (16.7)	195 (18.6)	582 (18.3)
		19-25 years	570 (61.7)	446 (48.8)	480 (47.6)	389 (50.9)	545 (52.2)	1721 (54.1)
		26-30 years	89 (9.7)	166 (18.2)	199 (19.7)	143 (18.8)	198 (18.9)	490 (15.4)

		After 30 years	111 (12.0)	120 (13.2)	117 (11.6)	104 (13.6)	108 (10.3)	391 (12.2)
Chi^2			67.9				9.23	
p-value			0.001 (S)				0.02 (S)	
4.	Correct age of marriage for Boys	1.15 to 18 years	114 (12.4)	143 (15.6)	172 (17.1)	121 (15.9)	128 (12.2)	487 (15.3)
		19-25 years	386 (41.8)	433 (47.4)	447 (44.4)	337 (44.2)	524 (50.2)	1428 (44.8)
		26-30 years	378 (40.9)	277 (30.4)	349 (34.6)	270 (35.3)	337 (33.2)	1119 (35.1)
		After 30 years	46 (4.9)	60 (6.6)	40 (3.9)	35 (4.6)	57 (5.4)	150 (4.8)
Chi^2			32.54				12.59	
p-value			0.001 (S)				0.006 (S)	
5.	Negative consequences of child marriage	Taking more responsibilities in early age	425 (46.1)	351 (38.4)	410 (40.7)	283 (37.1)	444 (42.5)	1316 (41.3)
		Facing health related consequences	87 (9.5)	85 (9.3)	119 (11.9)	98 (12.9)	100 (9.6)	374 (11.8)
		Break up of marriage due to lack of reconciliation	49 (5.3)	95 (10.4)	44 (4.4)	42 (5.6)	56 (5.4)	204 (6.5)
		Interruption in studies	62 (6.7)	97 (10.6)	80 (7.9)	54 (7.1)	108 (10.4)	247 (7.8)
		Less chance of employment	29 (3.2)	57 (6.2)	62 (6.2)	41 (5.4)	51 (4.8)	159 (4.9)
		Child rearing related problem	35 (3.7)	49 (5.4)	57 (5.6)	54 (7.0)	54 (5.1)	161 (5.0)
		Financial problems in family	45 (4.8)	71 (7.8)	63 (6.2)	64 (8.3)	63 (6.0)	201 (6.4)
		All of the above	192 (20.7)	108 (11.9)	173 (17.1)	127 (16.6)	170 (16.2)	522 (16.3)
Chi^2			111.75				11.35	
p-value			0.001 (S)				0.12 (NS)	
6.	Child marriage is permanent than normal marriage	Yes	449 (48.5)	472 (51.7)	519 (51.4)	320 (41.9)	499 (47.7)	1534 (48.1)
Chi^2			20.37				0.07	
p-value			0.001 (S)				0.79 (NS)	
7.	Knowledge about someone who is happy with child	Yes	171 (18.5)	252 (27.6)	298 (29.5)	214 (28.0)	270 (25.8)	815 (25.6)

	marriage							
Chi^2			36.56				0.019	
p-value			0.001 (S)				0.89 (NS)	
8.	Reason of child marriage	Tradition and Custom	558 (60.4)	437 (47.8)	484 (48.1)	397 (52.0)	551 (52.7)	1616 (50.8)
		Illiteracy	188 (20.4)	332 (36.4)	317 (31.5)	309 (40.5)	344 (32.9)	960 (30.1)
		Security of girls	126 (13.6)	91 (9.9)	77 (7.6)	29 (3.8)	89 (8.5)	352 (11.1)
		Absence of father in family.	52 (5.6)	53 (5.9)	129 (12.8)	28 (3.7)	62 (5.9)	256 (8.0)
Chi^2			191.20				12.05	
p-value			0.001 (S)				0.007 (S)	
9.	Knowledge of laws against child marriage	Yes	638 (69.0)	619 (67.8)	710 (70.4)	533 (69.8)	677 (64.7)	2252 (70.7)
Chi^2			1.71				13.33	
p-value			0.63 (NS)				0.001 (S)	

The data furnished in Table 4.8c provide information related to association between views on child marriage and demographic variables i.e. family income and type of family. Maximum percentage of respondents i.e. 32.1% and 31.6% whose family income was between 1500 to 3000 and less than 1500 respectively revealed that a marriage is referred to be a child marriage when boys and girls are less than 18 years at the time of marriage. Almost equal percentage of respondents whose family income was more than 8000 (28.7%) and between 1500 to 3000 (28.3%) mentioned that when both boys and girls are less than 15 years at the time of marriage it is considered child marriage. At the time of marriage if boys are less than 21 years and girls are less than 18 years, it is regarded as child marriage as responded by 28.1% and 26.8% of the respondents whose income was between 3000 to 8000 and less than 1500 respectively. According to 24.1% and 21.5% of the respondents whose family income was between 3000 to 8000 and 1500 to 3000 respectively reported that marriage is considered to be child marriage if at the time of marriage both are less than 21 years. Maximum percentage of respondents (24.8%) from joint family explained that child marriage involves the marriage of boys and girls whom age is less than 15 years while 27.9% reported that when boys and girls are less than 18years at the time of marriage it is considered child marriage. Around 22.2% of the respondents from joint families asserted that if the age of boys and girls is less than 21 years at

the time of marriage it is referred as child marriage. If Boys are less than 21 years and girls are less than 18 years, such type of marriage is known as child marriage as revealed by 26.1% of the respondents who belonged to nuclear families. The difference was found to be significant.

Majority of the respondents (75.2%) whose family income was less than 1500 claimed that child marriage is not correct followed by 67.9% of the respondents whose family income was more than 8000. The respondents whose family income was between 3000 to 8000 (19.9%) and 1500 to 3000 (18.8%) stated that child marriage is correct or not it depends on the situation. The child marriage is correct was mentioned by 18.2% and 16.8% of the respondents whose family income was more than 8000 and between 1500 to 3000 respectively. Majority of the respondents (68.4%) from nuclear families asserted that child marriage is not correct while on the other hand 15.9% of the respondents from nuclear families claimed that child marriage is correct. The response of the 20.3% of the respondents from joint families was found neutral as they reverted that child marriage is correct or not it depends on the situation. The difference was found to be statistically significant.

More than half of the respondents whose income was less than 1500 (61.7%) and income more than 8000 (50.9%) highlighted that the correct age of marriage for girls is 19-25 years. 15 to 18 years is the correct age of marriage was supported by 21.1% and 19.8% of the respondents whose family income was between 1500 to 3000 and 3000 to 8000 respectively. About 19.7% and 18.8% of the respondents with family income between 3000 to 8000 and more than 8000 revealed that 26-30years is the correct age of marriage for girls. A small percentage of respondents i.e. 13.6% (income more than 8000) and 13.2% (income between 1500 to 3000) supported marriage after 30 years for girls. More than half of the respondents (54.1%) from nuclear families believed that the correct age of marriage for girls is 19-25years while according to12.2% of the respondents marriage after 30 years is also correct. Almost equal percentage of respondents from joint families i.e. 18.9 and 18.6% mentioned that the correct age of marriage for girls is 26-30years and 15 to 18 years respectively. Statistically, the difference was found to be significant.

Less than half of the respondents i.e. 47.4% and 44.4% whose family income was between 1500 to 3000 and between 3000 to 8000 respectively described that the correct age of

marriage for boys is 19-25years. 26-30years was portrayed as the correct age of marriage for boys by those respondents whose family income was less than 1500 (40.9%) and more than 8000 (35.3%). According to 17.1% and 15.9% of the respondents with family income between 3000 to 8000 and more than 8000 respectively responded that 15 to 18years is the correct age of marriage for boys. As per the views of 6.6% of the respondents with family income 1500 to 3000 marriage after 30 years is appropriate for boys. Half the percentage of respondents (50.2%) from joint families mentioned that 19-25years is correct age of marriage for boys while on the other hand 35.1% of the respondents from nuclear families stated that 26-30 years is the appropriate age for boys to get married. Correct age of marriage for boys is 15 to 18 years was quoted by 15.3% of the respondents who belonged to nuclear families. A very small percentage of respondents from joint families supported marriage after the age of 30years for boys. The difference was found to be statistically significant.

Negative consequences of child marriage, child marriage is more permanent than normal marriage and respondents know someone who is happy with child marriage was not found to be significantly associated with type of family whereas knowledge of laws against child marriage was found to be non-significantly associated with family's income.

Maximum percentage of respondents i.e. 46.1% and 40.7% with family income less than1500 and between 3000 to 8000 respectively reported that child marriage brings a lot of responsibilities in early age. Likewise 20.7% and 17.1% of the respondents from similar family income background reported that their views are concurrent with all the negative consequences mentioned about child marriage. Child marriage troubles with health related issues as reported by 12.9% and 11.9% of the respondents whose family income is more than 8000 and between 3000 to 8000 respectively. Child marriage causes interruption in studies followed by breakup of marriage due to lack of reconciliation as reverted by 10.6% and 10.4% of the respondents whose family income is between 1500 to 3000. 8.3% and 7.0% of the respondents with income more than 8000 reported that child marriage lead to financial problems and child rearing related problems respectively. Almost equal percentage of respondents i.e. 6.2% with income between1500 to 3000 and 3000 to 8000 stated that child marriage decreases chances of employment. The difference was found to be statistically significant.

Almost equal percentage of respondents whose income is between 1500 to 3000 (51.7%) and 3000 to 8000 (51.4%) highlighted that child marriage is more permanent than normal marriage. Statistically, the difference was found to be significant.

About 29.5% and 28.0% of the respondents whose income was between 3000 to 8000 or more than 8000 respectively claimed that they know few people who are happy with child marriage. The difference was found to be highly significant.

More than half of the respondents with family income less than 1500 (60.4%) and more than 8000 (52.0%) highlighted that tradition and customs are the reason for child marriage. Illiteracy as the cause of child marriage was reported by 40.5% and 36.4% of the respondents whose family income was more than 8000 and between 1500 to 3000 respectively. Respondents whose family income was less than 1500 (13.6%) and between 1500 to 3000 (9.9%) asserted that security of girls compels the family to arrange for child marriage. Absence of father in the family lead to child marriages as described by 12.8% of the respondents whose family income was between 3000 to 8000. Majority of the respondents from Joint families i.e. 52.7% and 32.9% revealed that the reason behind child marriage is tradition/ customs and illiteracy. About 11.1% and 8.0% of the respondents from nuclear families mentioned that security of girls and absence of father in the family respectively lead to child marriages. Majority of the respondents from nuclear families responded that they have knowledge of laws against child marriage. The difference was found to be highly significant.

So, the table signify that family income was found to be statistically associated with views on child marriage except for knowledge of laws against child marriage which was found to be not significantly associated with family income. Type of family was found to be associated with views on career counselling except for negative consequences of child marriage, child marriage is permanent than normal marriage and someone known who is happy with child marriage.

Table 4.8d: Association between parental occupation and views on child marriage

S.No.	Question		Father's Occupation					Mother's Occupation				
			B f (%)	F f (%)	L f (%)	S f (%)	UE f (%)	B f (%)	F f (%)	HW f (%)	L f (%)	S f (%)
1.	What is child marriage	Boys and girls are <18 years at marriage	137 (29.0)	128 (22.7)	751 (27.9)	128 (29.1)	5 (6.8)	0 (0.0)	3 (10.0)	1048 (27.8)	97 (24.0)	1 (16.6)
		Boys are <21 years and girls are <18 yrs	131 (27.7)	136 (24.3)	637 (23.7)	130 (29.7)	20 (27.4)	0 (0.0)	10 (33.3)	946 (25.0)	97 (24.0)	1 (16.6)
		At marriage both are <21 yrs	103 (21.8)	121 (21.5)	596 (22.3)	75 (17.1)	29 (39.8)	8 (88.9)	6 (20.0)	816 (21.6)	93 (23.1)	1 (16.6)
		At marriage both are less than 15 yrs.	101 (21.5)	177 (31.5)	700 (26.1)	106 (24.1)	19 (26.0)	1 (11.1)	11 (36.7)	971 (25.6)	117 (28.9)	3 (50.2)
Chi2			50.5					35.1				
p-value			0.001 (S)					0.001 (S)				
2.	Child marriage is Correct	Yes	73 (15.5)	73 (12.9)	409 (15.3)	89 (20.3)	6 (8.2)	0 (0.0)	2 (6.6)	579 (15.4)	68 (16.8)	1 (16.6)
		No	325 (68.9)	401 (71.4)	1798 (66.9)	278 (63.3)	64 (87.6)	5 (55.6)	25 (83.3)	2564 (67.8)	267 (66.1)	5 (83.4)
		Depends on Situation	74 (15.6)	88 (15.7)	477 (17.8)	72 (16.4)	3 (4.2)	4 (44.4)	3 (10.1)	638 (16.8)	69 (17.1)	0 (0.0)
Chi^2			27.61					11.00				
p-value			0.001 (S)					0.20 (NS)				
3.	Correct age of marriage for girls	15 to 18 years	87 (18.4)	74 (13.2)	516 (19.2)	83 (18.9)	17 (23.3)	0 (0.0)	4 (13.3)	696 (18.4)	76 (18.8)	1 (16.6)
		19-25 years	236 (50.0)	305 (54.3)	1507 (56.1)	195 (44.4)	23 (31.6)	4 (44.5)	19 (63.3)	2027 (53.6)	214 (52.9)	2 (33.4)
		26-30 years	89 (18.8)	116 (20.6)	360 (13.4)	92 (20.9)	31 (42.4)	5 (55.5)	5 (16.7)	604 (15.9)	72 (17.8)	2 (33.4)
		After 30 years	60 (12.8)	67 (11.9)	301 (11.3)	69 (15.8)	2 (2.7)	0 (0.0)	2 (6.7)	454 (12.1)	42 (10.5)	1 (16.6)
Chi^2			99.0					16.36				
p-value			0.001 (S)					0.17 (NS)				

4.	Correct age of marriage for Boys	1.15 to 18 years	67 (14.2)	79 (14.1)	386 (14.4)	82 (18.6)	1 (1.4)	1 (11.1)	3 (10.0)	546 (14.5)	65 (16.1)	0 (0.0)
		19-25 years	180 (38.1)	264 (46.9)	1277 (47.6)	196 (44.7)	35 (47.9)	5 (55.5)	20 (66.7)	1755 (46.5)	170 (42.1)	2 (33.3)
		26-30 years	192 (40.7)	202 (35.9)	904 (33.7)	134 (30.5)	24 (32.8)	1 (11.1)	4 (13.3)	1299 (34.3)	148 (36.6)	4 (66.7)
		After 30 years	33 (7.0)	17 (3.1)	117 (4.3)	27 (6.2)	13 (17.9)	2 (22.3)	3 (10.0)	181 (4.7)	21 (5.2)	0 (0.0)
Chi^2			66.44					21.96				
p-value			0.001(S)					0.03 (S)				
5.	Negative consequences of child marriage	Taking more responsibilities in early age	175 (37.0)	205 (36.2)	1199 (44.7)	135 (30.8)	46 (63.0)	4 (44.5)	16 (53.4)	1540 (40.7)	198 (49.0)	2 (33.4)
		Facing health related consequences	53 (11.2)	62 (11.0)	307 (11.5)	44 (10.0)	8 (10.9)	0 (0.0)	0 (0.0)	423 (11.1)	50 (12.4)	1 (16.7)
		Break up of marriage due to lack of reconciliation	34 (7.2)	31 (5.4)	172 (6.5)	23 (5.3)	0 (0.0)	0 (0.0)	0 (0.0)	251 (6.6)	8 (1.9)	1 (16.7)
		Interruption in studies	45 (9.5)	46 (8.9)	201 (7.5)	53 (12.0)	10 (13.8)	1 (11.1)	1 (3.3)	325 (8.6)	28 (6.9)	0 (0.0)
		Less chance of employment	28 (5.9)	39 (6.9)	121 (4.6)	19 (4.4)	3 (4.2)	0 (0.0)	1 (3.3)	179 (4.8)	30 (7.5)	0 (0.0)
		Child rearing related problem	16 (3.5)	24 (4.2)	138 (5.1)	37 (8.4)	0 (0.0)	0 (0.0)	0 (0.0)	194 (5.1)	20 (4.9)	1 (16.6)
		Financial problems in family	36 (7.7)	31 (5.4)	159 (5.9)	37 (8.4)	1 (1.3)	4 (44.4)	0 (0.0)	245 (6.5)	15 (3.8)	0 (0.0)
		All of the above	85 (18.0)	124 (22.0)	387 (14.2)	91 (20.7)	5 (6.8)	0 (0.0)	12 (40.0)	624 (16.6)	55 (13.6)	1 (16.6)
Chi^2			112.1					82.48				
p-value			0.001 (S)					0.001 (S)				
6.	Child	Yes	187	216	1390	205	35	5	5	1802	218	3

	marriage is more permanent than normal marriage		(39.6)	(38.4)	(51.7)	(46.7)	(47.9)	(55.5)	(16.6)	(47.66)	(53.9)	(50.0)
Chi^2			49.6					17.93				
p-value			0.001 (S)					0.001 (S)				
7.	You know someone who is happy with child marriage	Yes	117 (24.7)	150 (26.6)	634 (23.6)	148 (33.7)	36 (49.3)	1 (11.1)	7 (23.3)	934 (24.7)	141 (34.9)	2 (33.3)
Chi^2			42.69					21.17				
p-value			0.001 (S)					0.001 (S)				
8.	Reason of child marriage	Tradition and Custom	258 (54.7)	270 (48.1)	1349 (50.3)	253 (57.7)	37 (50.6)	1 (11.1)	18 (60.0)	1962 (51.9)	182 (45.1)	4 (66.7)
		Illiteracy	145 (30.7)	209 (37.1)	775 (28.9)	156 (35.5)	19 (26.0)	4 (44.4)	9 (30.0)	1168 (30.9)	121 (29.9)	2 (33.3)
		Security of girls	31 (6.6)	62 (11.0)	318 (11.8)	18 (4.1)	12 (16.4)	0 (0.0)	1 (3.3)	385 (10.2)	55 (13.6)	0 (0.0)
		Absence of father in family.	38 (8.0)	21 (3.8)	242 (9.0)	12 (2.7)	5 (6.8)	4 (44.5)	2 (6.7)	266 (7.0)	46 (11.4)	0 (0.0)
Chi^2			84.42					40.74				
p-value			0.001 (S)					0.001 (S)				
9.	Knowledge of laws against child marriage	Yes	335 (70.9)	384 (68.3)	1866 (69.5)	291 (66.2)	53 (72.6)	0 (0.0)	23 (76.6)	2602 (68.8)	301 (74.5)	3 (50.0)
Chi^2			3.17					27.65				
p-value			0.52 (NS)					0.001 (S)				

B- Business, F-Farming, L-Labour, S-Service,UE-Un-employed, HW-House-wife

The data presented in Table 4.8e depicts the association between parental occupation and views on child marriage. Maximum percentage of respondents whose fathers were unemployed (39.8%) and employed as labour (22.3%) described that a marriage is considered chid marriage if at the time of marriage both boys and girls are less than 21 years. Likewise, 88.9% and 23.1% of the respondents whose mothers were running their own business and working as labour respectively described child marriage in the same manner. The respondents whose fathers were farmers (31.5%) and labour (26.1%) explained that at the time of marriage when both boys and girls are less than 15years the marriage will be regarded as child marriage. Similar response was recorded from half the percentage of respondents whose mothers occupation was service (50.2%) followed by 36.2% of the respondents whose mothers occupation was farming. Almost equal percentage of respondents whose fathers were service class (29.1%) and running their own business (29.0%) responded that according to them a marriage is described as child marriage when boys and girls are less than 18 years at the time of marriage. If boys are less than 21 years and girls are less than 18 years at the time of marriage, the marriage is referred to be child marriage as reported by 29.7% and 27.7% of the respondents whose fathers' occupation was Service and business respectively. About 33.3% of the respondents whose mothers were working as labour followed by 25.0% of the respondents whose mothers were housewives mentioned that when boys are less than 21 years and girls are less than 18years at the time of marriage, the marriage is called child marriage. Child marriage is described as the marriage when boys and girls are less than 18years at the time of marriage as reported by 27.8% and 24.0% of the respondents whose mothers were housewives and labour respectively. Statistically, the difference was found to be significant.

Child marriage is correct or not and correct age of marriage of girls was not found to be significantly associated with mothers occupation.

Majority of the respondents (87.6%) whose fathers were unemployed stated that the child marriage is not correct followed by 71.4% of the respondents whose fathers occupation was farming. According to 20.3% and 15.5% of the respondents whose fathers were service class and running their own business respectively responded that the child marriage is correct. As per the views of 17.8% and 16.45% of the respondents whose fathers were working as labour or engaged in service described that child marriage is correct or not it depends on the situation. Statistically, the difference was found to be significant.

More than half of the respondents whose fathers were engaged in labour (56.1%) and farming (54.3%) asserted that the correct age of marriage for girls is 19-25years. According to 42.4% and 20.9% of the respondents whose fathers were unemployed and engaged in services respectively stated that the 26-30years is the correct age of marriage for girls. 15 to 18 years is the correct age of marriage for girls was explained by 23.3% of the respondents whose fathers were unemployed followed by 19.2% of the respondents whose father's occupation was labour. As per the views of 15.8% and 12.8% of the respondents whose father's occupation was service and business respectively supported marriage after 30 years for girls. The difference was found to be significant.

Almost equal percentage of respondents whose fathers were unemployed (47.9%) followed by 47.6% of the respondents whose fathers occupation was labour supported that the correct age of marriage for boys is 19-25years. Similarly, more than half of the respondents whose mother's occupation was farming (66.7%) and business (55.5%) supported the similar age range perfect for boys to get married. As per the views of 40.7% and 35.9% of the respondents whose fathers were engaged in business and farming respectively highlighted the age of 26-30 years for boys to get married while on the other hand this similar age range was reported correct by 66.7% and 36.6% of the respondents whose mothers were service class and labour respectively. The correct age of marriage for boys is 15 to 18 years was revealed by 18.6% of the respondents whose fathers were engaged in services followed by 14.4% of the respondents whose fathers were working as labour. Marriage after 30 years was found correct by 17.9% of the respondents whose fathers were unemployed while on the other hand marriage after 30 years was found appropriate by 22.3% of the respondents whose mothers were running their own business followed by 10.0% of the respondents whose mothers were working as farmer. The respondents whose mothers were working as labour (16.1%) followed by 14.5% of the respondents whose mothers were housewives supported the age range of 15 to 18 years correct for boys' marriage. The difference was found to be statistically significant.

Majority of the respondents whose fathers were unemployed (63.0%) described that child marriage forces to take more responsibilities in early age followed less than half of the respondents (44.6%) whose fathers occupation was labour. Around 22.1% and 20.7% of the respondents whose fathers occupation was service and farming respectively described that all the mentioned negative consequences of child marriage are valid and their views synchronise with the same. Child marriage lead to interruption in studies was reported by 13.7% of the

respondents whose fathers were unemployed followed by 12.0% of the respondents whose mother's occupation was service. Almost equal percentage of respondents i.e. 11.4% and 11.2% whose fathers were businessman and labour respectively explained that child marriage causes health related problems. Equal percentage of respondents (8.4%) whose fathers were engaged in services expressed that child marriage brings financial problems and child rearing related problems. A slightly less percentage of respondents i.e. 7.2% and 6.9% whose fathers were businessman and farmer respectively quoted that child marriage lacks reconciliation which cause marriages to break and at the same time it causes less chances of employment. Majority of the respondents (53.3%) whose mothers were farmers followed by 49.0% of the respondents whose mothers were labour stated that the negative consequences of child marriage is that it compels to take more responsibilities at an early age. Financial problem due to child marriage was reported by 44.4% of the respondents whose mothers were running their own business. Around 40.0% and 16.6% of the respondents whose mothers were engaged in farming and services respectively reported that their views about negative consequences of child marriage are concurrent with the views as mentioned. About 16.6% of the respondents whose mothers occupation was service asserted that child marriage causes health related problems, break up of marriage due to lack of reconciliation and child rearing related problems. Interruption in studies and less chances of employment due to child marriage was reported by 11.1% and 7.4% of the respondents whose mother's occupation was business and labour respectively. Statistically, the difference was found to be highly significant.

More than half of the respondents (51.7%) whose fathers were working as labour believed that child marriage is more permanent than normal marriage followed by 47.9% and 46.7% of the respondents whose fathers were unemployed and engaged in service respectively. Maximum percentage of respondents (55.5%) whose mothers were running their own business asserted that child marriage is more permanent than normal marriage followed by 53.9% and 50.0% of the respondents whose mother's occupation was labour and service respectively. The difference was found to be statistically highly significant.

Majority of the respondents (49.3%) whose fathers were unemployed stated that they know someone who is happy with child marriage followed by 33.7% of the respondents whose father's were service class. The respondents whose mothers were working as labour or engaged in service i.e. 34.9% and 33.3% mentioned that they know someone who is happy with child marriage. Statistically the difference was found to be significant.

The foremost reason for child marriage is tradition and custom was quoted by 57.6% of the respondents whose fathers were service class followed by 54.6% of the respondents whose fathers had their own business. Second reason which was highlighted for child marriage was illiteracy by 37.1% and 35.5% of the respondents whose fathers were farmers and service class respectively. Third reason i.e. security of girls was quoted by 16.4% of the respondents whose fathers were unemployed followed by 11.8% of the respondents whose fathers occupation was labours. Absence of father in family is the reason of child marriage was mentioned by 9.0% and 8.0% of the respondents whose fathers were working as labour and running their own business respectively. Majority of the respondents (66.7%) whose mothers occupation was service expressed that tradition and customs are the reason behind child marriage followed by 60.0% of the respondents whose mothers were farmers. About 44.4% (Business) and 33.3% (Service) of the respondents highlighted illiteracy as the reason behind child marriage. Mothers who were running their own business (44.5%) and working as labour (11.4%) stated that absence of father in the family forces the family to conduct child marriage. Around 13.6% of the respondents whose mothers were labour stated that security of girls causes child marriage followed by 10.2% of the respondents whose mothers were housewives. The difference was found to be statistically significant.

Research from Lal depicts that about child marriage in India is rooted in religious traditions, social practices, economic factors, and prejudices that have taken root in society (Lal B. Suresh and G. Kavitha, 2013). Then, research by Kamal shows that the education of women and their husbands, women's work, housing, and religion are important determinants of child marriages in Bangladesh (2012).

Father’s occupation was not found to be significantly associated with knowledge of laws against child marriage. Majority of the respondents (76.6%) whose mothers were farmers responded that they have knowledge of laws against child marriage followed by 74.5% of the respondents whose mothers were working as labour. Statistically the difference was found to be significant.

Thus, the table reveals that father’s occupation was found to be significantly associated with views on child marriage except for knowledge of laws against child marriage. The mother occupation was not found to be significantly associated with whether child marriage is correct or not and correct age of marriage for girls while for all other views it was found to be significant.

Table 4.8e: Association between Parental education and views on child marriage

S. No.	Question		Father's Education							Mother's Education			
			G f(%)	ITI f(%)	MBA f(%)	M f (%)	P f(%)	6 -12th f (%)	UE f(%)	BA f(%)	P f(%)	UE f (%)	6 -12th f (%)
1.	What is child marriage	Boys and girls are <18 yrs at marriage	23 (35.9)	1 (33.3)	0 (0.0)	16 (34.0)	195 (27.9)	395 (26.8)	333 (26.9)	21 (23.8)	121 (27.7)	606 (29.3)	219 (25.4)
		Boys are <21 yrs and girls are < 18 yrs	26 (40.6)	2 (66.7)	0 (0.0)	10 (21.2)	215 (30.7)	350 (23.7)	274 (22.3)	19 (21.5)	103 (23.7)	485 (23.4)	238 (27.6)
		At the time of marriage both are <21 yrs	8 (12.6)	0 (0.0)	0 (0.0)	8 (17.2)	112 (15.9)	353 (23.9)	308 (24.9)	20 (22.8)	100 (22.9)	457 (22.2)	192 (22.3)
		At marriage both are <15 yrs.	7 (10.9)	0 (0.0)	4 (100)	13 (27.6)	179 (25.5)	377 (25.6)	321 (25.9)	28 (31.9)	112 (25.7)	517 (25.1)	213 (24.7)
Chi^2			65.5							10.45			
p-value			0.001(S)							0.3 (NS)			
2.	Child marriage is Correct	Yes	12 (18.8)	1 (33.3)	0 (0.0)	6 (12.8)	107 (15.3)	194 (13.2)	192 (15.5)	10 (11.4)	56 (12.8)	302 (14.6)	123 (14.3)
		No	50 (78.1)	2 (66.7)	0 (0.0)	33 (70.2)	476 (67.9)	973 (65.9)	879 (71.1)	73 (82.9)	291 (66.7)	1417 (68.6)	595 (69.0)
		Depends on Situation	2 (3.1)	0 (0.0)	4 (100)	8 (17.0)	118 (16.8)	308 (20.9)	165 (13.4)	5 (5.7)	89 (20.5)	346 (16.8)	144 (16.7)
Chi^2			57.85							13.93			
p-value			0.001 (S)							0.03 (S)			
3.	Correct age of marriage for girls	1.15 to 18 years	8 (12.5)	0 (0.0)	0 (0.0)	3 (6.4)	154 (21.9)	262 (17.8)	238 (19.2)	9 (10.3)	92 (21.1)	407 (19.7)	139 (16.1)
		19-25 years	40 (62.5)	3 (100)	4 (100)	27 (57.4)	346 (49.4)	816 (55.4)	684 (55.4)	62 (70.5)	246 (56.4)	1154 (55.8)	427 (49.6)
		26-30 years	12 (18.7)	0 (0.0)	0 (0.0)	6 (12.7)	101 (14.5)	240 (16.2)	190 (15.4)	4 (4.5)	58 (13.3)	283 (13.8)	189 (21.9)
		After 30 years	4 (6.3)	0 (0.0)	0 (0.0)	11 (23.5)	100 (14.2)	157 (10.6)	124 (10.0)	13 (14.7)	40 (9.2)	221 (10.7)	107 (12.4)
Chi^2			37.5							57.4			

p-value			0.004 (S)							0.001 (S)			
4.	**Correct age of marriage for Boys**	**1.15 to 18 years**	6 (9.4)	0 (0.0)	0 (0.0)	7 (14.9)	109 (15.6)	184 (12.5)	165 (13.4)	8 (9.0)	80 (18.3)	260 (12.6)	106 (12.3)
		19-25 years	14 (21.9)	0 (0.0)	4 (100.0)	16 (34.0)	299 (42.7)	704 (47.8)	605 (48.9)	34 (38.7)	192 (44.1)	1034 (50.1)	358 (41.6)
		26-30 years	43 (67.2)	2 (66.6)	0 (0.0)	20 (42.6)	246 (35.0)	520 (35.2)	392 (31.8)	40 (45.5)	145 (33.3)	648 (31.4)	355 (41.2)
		After 30 years	1 (1.5)	1 (33.4)	0 (0.0)	4 (8.5)	47 (6.7)	67 (4.5)	74 (5.9)	6 (6.8)	19 (4.3)	123 (5.9)	43 (4.9)
Chi^2			61.05							45.56			
p-value			0.001 (S)							0.001 (S)			
5.	**Negative consequences of child marriage**	**Taking more responsibilities in early age**	25 (39.0)	2 (66.6)	0 (0.0)	13 (27.6)	257 (36.6)	711 (48.2)	511 (41.3)	28 (31.8)	217 (49.7)	879 (42.5)	379 (43.9)
		Facing health related consequences	4 (6.2)	0 (0.0)	0 (0.0)	4 (8.5)	87 (12.4)	164 (11.1)	112 (9.0)	10 (11.3)	56 (12.8)	202 (9.7)	82 (9.5)
		Break up of marriage due to lack of reconciliation	3 (4.6)	0 (0.0)	0 (0.0)	4 (8.5)	43 (6.1)	68 (4.6)	77 (6.2)	1 (1.1)	18 (4.1)	136 (6.5)	42 (4.8)
		Interruption in studies	3 (4.6)	0 (0.0)	0 (0.0)	9 (19.1)	72 (10.2)	116 (7.8)	102 (8.2)	9 (10.2)	38 (8.7)	159 (7.7)	91 (10.5)
		Less chance of employment	3 (4.6)	0 (0.0)	0 (0.0)	0 (0.0)	32 (4.5)	67 (4.5)	63 (5.1)	0 (0.0)	21 (4.8)	113 (5.4)	35 (4.0)
		Child rearing related problem	2 (3.1)	0 (0.0)	0 (0.0)	3 (6.3)	28 (3.9)	70 (4.7)	73 (5.9)	5 (5.6)	24 (5.5)	94 (4.5)	43 (4.9)
		Financial problems in family	5 (7.8)	0 (0.0)	0 (0.0)	2 (4.2)	40 (5.7)	72 (4.8)	90 (7.2)	6 (6.8)	20 (4.5)	134 (6.4)	40 (4.6)
		All of the above	19 (29.6)	1 (33.3)	4 (100)	12 (25.5)	142 (20.2)	207 (14.0)	208 (16.8)	29 (32.9)	42 (9.6)	348 (16.8)	150 (17.4)
Chi^2			97.7							66.3			
p-value			0.001 (S)							0.001 (S)			
6.	**Child marriage is more permanent**	**Yes**	24 (37.5)	0 (0.0)	0 (0.0)	17 (36.1)	349 (49.7)	742 (50.3)	535 (43.2)	31 (35.2)	165 (37.8)	1029 (49.8)	414 (48.0)

	than normal marriage												
Chi^2			26.15							26.21			
p-value			0.001(S)							0.001 (S)			
7.	**You know someone who is happy with child marriage**	**Yes**	11 (17.1)	1 (33.3)	0 (0.0)	6 (12.7)	175 (24.9)	352 (23.8)	349 (28.2)	2 (2.7)	133 (30.5)	514 (24.8)	179 (20.7)
Chi^2			14.8							38.7			
p-value			0.02 (S)							0.001 (S)			
8.	**Reason of child marriage**	**Tradition and Custom**	36 (56.3	1 (33.3)	0 (0.0)	35 (74.5)	373 (53.2)	709 (48.0)	687 (55.6)	47 (53.4)	223 (51.2)	1125 (54.5)	440 (51.0)
		Illiteracy	15 (23.4)	0 (0.0)	4 (100.0)	9 (19.1)	205 (29.3)	496 (33.7)	314 (25.4)	36 (40.9)	131 (30.0)	524 (25.4)	274 (31.8)
		Security of girls	1 (1.6)	2 (66.7)	0 (0.0)	2 (4.3)	66 (9.4)	134 (9.1)	166 (13.4)	2 (2.3)	54 (12.4)	271 (13.1)	56 (6.5)
		Absence of father in family	12 (18.7)	0 (0.0)	0 (0.0)	1 (2.1)	57 (8.1)	136 (9.2)	69 (5.6)	3 (3.4)	28 (6.4)	145 (7.0)	92 (10.7)
Chi^2			94.07							62.06			
p-value			0.001 (S)							0.001 (S)			
9.	**Knowledge of laws against child marriage**	**Yes**	49 (76.5)	1 (33.3)	4 (100.0)	42 (89.3)	483 (68.9)	1090 (73.9)	794 (64.2)	80 (90.9)	326 (74.7)	1381 (66.8)	622 (72.1)
Chi^2			43.67							34.36			
p-value			0.001 (S)							0.001 (S)			

G- graduation, M- masters, P- primary, UE- un-educated

The data presented in Table 4.8e reflects the association between parental education and views on child marriage. All the respondents (100.0%) whose fathers were educated upto MBA reported that the marriage is considered child marriage if at the time of marriage both boys and girls are less than 15 years. Maximum percentage of respondents whose fathers were educated upto ITI (66.7%) and graduation (40.6%) reported that child marriage is one where the boys are less than 21 years and girls are less than 18 years. About 35.9% and 34.0% of the respondents whose fathers were educated upto graduation and masters respectively mentioned that a marriage is considered child marriage when boys and girls are less than 18 years at the time of marriage. At the time of marriage when both boys and girls are less than 21 years is known as child marriage was specified by 24.9% and 23.9% of the respondents whose fathers were uneducated or educated upto 6^{th} to 12^{th} respectively. The difference was found to be significant however the mother education was not found to be significantly associated with information about correct age of child marriage.

All the respondents (100.0%) whose fathers had done MBA responded that according to them child marriage is correct or not it depends on the situation. Majority of the respondents (78.1%) whose fathers had done graduation followed by 71.1% of the respondents whose father were uneducated firmly believed that child marriage is not correct. Child marriage is correct was supported by only 33.3% and 18.8% of the respondents whose fathers education was upto ITI and Graduation respectively. According to 82.9% and 69.0% of the respondents whose mothers were educated upto BA and 6^{th} to 12^{th} respectively specified that child marriage is not correct. Child marriage is correct or not, it depends on the situation was mentioned by 20.5% and 16.8% of the respondents whose mothers were educated upto primary level and uneducated respectively. Almost equal percentage of respondents whose mothers were either uneducated (14.6%) or educated upto 6 to 12^{th} (14.3%) stated that child marriage is correct. Statistically, the difference was found to be highly significant.

All the respondents (100.0%) whose fathers were educated upto ITI and MBA stated that the correct age of marriage for girls is 19 to 25 years. Marriage after 30 years was supported by those respondents whose fathers had done masters (23.5%). The respondents whose mothers were educated upto primary (21.9%) followed by 19.2% of the respondents whose mothers were uneducated stated that correct age of marriage for girls is between 1.15 to 18years. About 18.7% and 16.2% of the respondents whose fathers were educated upto Graduation and 6^{th} to 12^{th}

respectively mentioned that 26 to 30 years is the correct age of marriage for girls. Maximum percentage of respondents (70.5%) whose mothers were educated upto BA followed by 56.4% of the respondents whose mothers were educated upto primary level illustrated that 19 to 25 years is the correct age for girls to get married. Around 21.9% of the respondents whose mothers were educated upto 6 to 12th explained that 26 to 30 years is the correct age for girls to get married while on the other hand 21.1% of the respondents whose mothers were educated upto primary level followed by 19.7% of the respondents whose mothers were uneducated specified that the correct age of marriage for girls is 1.15 to 18 years. Marriage of girls after 30years was supported by 14.7% and 12.4% of the respondents whose mothers were educated upto BA and 6 to 12th respectively. The difference was found to be highly significant.

All the respondents (100.0%) whose fathers were educated upto MBA reported that for boys 19 to 25 years is the correct age for marriage followed by 48.9% and 47.8% of the respondents whose fathers were uneducated and educated upto 6 to 12th respectively. About 67.2% and 66.6% of the respondents whose fathers were educated upto Graduation and ITI respectively firmly believed that the correct age of marriage for boys is 26-30 years. Marriage after 30years was supported by 33.4% of the respondents whose fathers had done ITI. A comparatively small percentage of respondents i.e. 15.6% and 14.9% whose fathers were educated upto primary and masters respectively mentioned that correct age of marriage for boys is 1.15 to 18 years. Data related to mother education depicts that 19 to 25years is the correct age of marriage for boys was expressed by 50.1% and 44.1% of the respondents whose mothers were uneducated and educated upto primary level respectively. According to 45.5% and 41.2% of the respondents whose mothers were educated upto BA and 6 to 12th respectively mentioned that 26 to 30 years is the correct age of marriage for boys. Around 18.3% of the respondents whose mothers were educated upto primary level stated that 1.15 to 18 years is the correct age of marriage for boys. Only a small percentage of respondents i.e. 6.8% of the respondents whose mothers were educated upto BA refereed that the correct age of marriage for boys is after 30 years. The difference was found to be statistically significant.

All the respondents (100.0%) whose fathers were educated upto MBA responded that all the specified consequences mentioned regarding the negative consequences of child marriage are valid followed by 33.3% of the respondents whose fathers had done ITI. Majority of the respondents i.e. 66.6% and 48.2% whose fathers were educated upto ITI and 6 to 12th

respectively reported that the negative consequences of child marriage is taking more responsibilities in early age. Interruption in studies was highlighted by 19.2% and 10.2% of the respondents whose fathers were educated upto masters and primary level respectively. Around12.4% and 11.1% of the respondents whose fathers were educated upto primary and 6 to 12^{th} mentioned that child marriage lead to several health related consequences. Breakup of marriage due to lack of reconciliation was stated by 8.5% and 6.2% of the respondents whose fathers had done masters and uneducated respectively. Financial problems in family, child rearing related problems and less chances of employment are some of the negative consequences of child marriage quoted by a small percentage of respondents i.e.7.8%, 6.3% and 5.1% whose fathers were educated upto Graduation, masters and uneducated respectively. Maximum percentage of respondents i.e. 49.7% and 43.9% whose mothers were educated upto primary level or 6 to 12^{th} respectively expressed that the negative consequences of child marriage is taking more responsibilities in early age. All the negative consequences of child marriage specified were found to appropriate by 32.9% and 17.4% of the respondents whose mothers were educated upto BA and 6 to 12^{th} respectively. Facing health related consequences due to child marriage was stated by 12.8% and 11.3% of the respondents whose mothers were educated upto primary level and BA respectively. Almost equal percentage of respondent's i.e.10.5% and 10.2% whose mothers were educated upto BA and 6 to 12^{th} respectively described that child marriage interrupts in studies. A small percentage of respondents i.e. 6.8% and 6.4% whose mothers were educated upto BA and uneducated respectively stated that the negative consequences of marriage is financial problems in family. Breakup of marriage due to lack of reconciliation is another negative consequence of child marriage was attributed by 6.5% and 4.8% of the respondents whose mothers were uneducated and educated upto 6^{th} to 12^{th}. Child marriage contribute towards child rearing related problems and less chance of employment was asserted by 5.6% and 5.4% of the respondents whose mothers were educated upto BA and uneducated respectively. The difference was found to be statistically significant.

Raj et. al., in 2010 also reported similar findings from his studies. He found that early marriage bereaves young girls of their childhood by overburdening them with domestic responsibility, motherhood, and sexual relations rather than allowing them to play with friends, go to school, and dream about a career.

Child marriage is more permanent than normal marriage was reported by majority of the respondents i.e. 50.3% and 49.7% of the respondents whose fathers were educated upto primary and 6 to 12th respectively while majority of the respondents (49.8%) whose mothers were uneducated upto believed the same followed by those respondents whose mothers were educated upto 6 to 12th (48.0%). Statistically the difference was found to be highly significant.

Maximum percentage of respondents (33.3%) whose fathers had done ITI followed by 28.2% of the respondents whose fathers were uneducated reported that they know someone around them who were happy with child marriage. 30.5% and 24.8% of the respondents whose mothers were educated upto primary and uneducated respectively mentioned that they know some couples who were happy with their child marriage. The difference was found to be statistically significant.

All the respondents (100.0%) whose fathers had done MBA attributed illiteracy as the main reason of child marriage followed by 33.7% of the respondents whose fathers were educated upto 6 to12th. Secondly, tradition and customs as the reason for child marriage was reported by 74.5% and 56.3% of the respondents whose fathers had done Masters and Graduation respectively. About 66.7% of the respondents whose fathers had done ITI stated that security of girls is the reason for child marriage. A small percentage of respondents i.e. 18.7% highlighted that the absence of father in the family is the compelling reason for child marriage. More than half of the respondents whose mothers were uneducated (54.5%) or educated upto BA (53.4%) reported that tradition and customs are the foremost reason for child marriage. Illiteracy was described as another major reason for child marriage by 40.9% and 31.8% of the respondents whose mothers were educated upto BA and 6 to 12th respectively. 13.1% and 12.4% of the respondents whose mothers were uneducated and educated upto primary level respectively attribute security of girls as the main reason for child marriage. A small percentage of respondents (10.7%) whose mothers were educated upto 6 to 12th specified that the absence of father in family is the reason for child marriage. The difference was found to be statistically significant.

Present study was supported by the study conducted by Yadav et. al., who also found that that among the marginalized communities, lack of education, poverty, parental pressure of early marriage and lack of safety for girls are crucial factors for child marriage. There are various studies conducted in India and in neighbouring countries such as Nepal that show that coming

from a particularly backward caste/class is a risk factor for early marriage, early pregnancy and sexual violence (2017).

All the respondents (100.0%) whose fathers were educated upto MBA reported that they have knowledge of laws against child marriage followed by 89.3% and 76.5% of the respondents whose fathers were educated upto masters and graduation respectively. Majority of the respondents (90.9%) whose mothers were educated upto BA followed by 74% and 72.1% of the respondents whose mothers were educated upto primary level and 6 to 12^{th} expressed that they have knowledge of laws against child marriage. The difference was found to be significant.

Hence, after the statistical analysis it was found that father's education was found to be significantly associated with views on child marriage while mother's education was not found to be significantly associated with information about age of child marriage.

Child marriage, which has existed for centuries, in our society is very complex issue, rooted deeply in gender inequality, tradition, and poverty. Despite having law and legislative measures, the practice is widely prevalent in rural areas, where prospects for girls can be limited. Exceptionally high prevalence of child marriage in many studies indicates that previous policies have been inadequate to sufficiently curb the social evil of child marriage. The outcome of these studies necessitates stricter enforcement of legislation, better educational opportunities for girls, particularly, after marriage, and easy access to quality health services.

SECTION 9: KNOWLEDGE ON GENDER IMBALANCES

In this progressive society all nations are heading towards millennium development goals striving to secure equality on all aspects of life including gender equality. Gender equality emphasizes freedom of choice and equality of opportunity for all men and women. Women throughout the globe have to be dependent on their male counterparts for making choices for them in one aspect of life or the other. Life Skills Education can play a significant role in empowering women and thereby bring gender equality in the society. Development of Life Skills in women will make them more informed and knowledgeable regarding their health; their rights and duties; various issues concerning the society and they will have more choices in their employability; in the decision making process; as an effective homemaker; and as a productive member of the society. Development of Life Skills can have far reaching effects in this direction.

Life Skills Education can open up new avenues for women for dealing with all aspects of their life in a progressive manner thus lessening the man woman divide.

Present study aims to see need of life skills education for school children to reduce gender imbalance. For this purpose, approximately 4000 adolescent students studying in different classes from 7th to 12th were selected from different government schools of Udham Singh Nagar. It was a need assessment study which was planned to understand the need of life skill education for adolescents for reducing gender imbalance. For this purpose data from adolescent boys and girls on their thinking and perception about different gender roles were analyzed through questionnaire and presented below.

Table 4.9: Association between demographic variables and Gender Imbalance

Variables		**Typical view on Gender Stereotyping f (%)**	**Moderate view on Gender Stereotyping f (%)**	**Liberal view on Gender Stereo typing f (%)**	**Chi^2**	**p-value**
Total Respondents	4230 (100)	2404 (58)	1656 (40)	52 (1)	32.05	0.001 (S)
Block	Gadarpur	419 (59.0)	289 (40.6)	3 (0.4)		
	Jaspur	417 (59.0)	277 (39.2)	13 (1.8)		
	Kashipur	415 (57.4)	288 (39.9)	19 (2.7)		
	Kichha	448 (63.3)	256 (36.2)	3 (0.5)		
	Rudrapur	413 (60.5)	268 (39.3)	2 (0.2)		
	Sitarganj	410 (58.5)	278 (39.7)	12 (1.8)		
Class	7th	409 (58.2)	286 (40.7)	8 (1.1)	83.5	0.001 (S)
	8th	447 (57.3)	330 (42.3)	3 (0.4)		
	9th	349 (49.6)	335 (47.6)	19 (2.8)		
	10th	487 (70.4)	198 (28.6)	7 (1.0)		
	11th	400 (60.6)	256 (38.8)	4 (0.6)		
	12th	430 (62.1)	251 (36.3)	11 (1.6)		
Gender	Female	943 (43.6)	1167 (54.1)	49 (2.3)	477.0	0.001 (S)
	Male	1579	489	3		

		(76.2)	(23.6)	(0.2)		
Age	Less than or equal to14 years	1220 (59.1)	809 (39.2)	35 (1.7)	7.3	0.02 (S)
	Greater than 14 years	1302 (60.1)	847 (39.1)	17 (0.8)		
Income	Less than 1500	519 (56.2)	403 (43.6)	2 (0.2)	61.3	0.00 1 (S)
	1501-3000	530 (58.0)	373 (40.9)	10 (1.1)		
	3001 to 8000	618 (61.3)	384 (38.1)	6 (0.6)		
	More than 8001	430 (56.4)	302 (39.6)	31 (4.0)		
Religion	Hindu	1328 (55.6)	1025 (42.9)	37 (1.5)	43.5	0.00 1 (S)
	Muslim	1178 (65.2)	614 (34.0)	15 (0.8)		
	Punjabi	16 (48.5)	17 (51.5)	0 (0.0)		
Fathers Education	Graduation	28 (43.8)	36 (56.2)	0 (0.0)	91.4	0.00 1 (S)
	ITI	0 (0.0)	3 (100.0)	0 (0.0)		
	MBA	0 (0.0)	4 (100.0)	0 (0.0)		
	Master	19 (40.4)	26 (55.3)	2 (4.3)		
	Primary	374 (53.3)	327 (46.6)	0 (0.0)		
	Six to Intermediate	832 (56.4)	618 (42.0)	25 (1.6)		
	Uneducated	841 (68.0)	392 (31.7)	3 (0.3)		
Mothers Education	BA	50 (56.8)	36 (41.0)	2 (2.2)	49.4	0.00 1 (S)
	Primary	223 (51.1)	208 (47.7)	5 (1.2)		
	Uneducated	1276 (61.8)	786 (38.1)	3 (0.1)		
	Six to Intermediate	500 (58.0)	343 (39.8)	19 (2.2)		
Type of Family	Joint	615 (58.8)	425 (40.6)	6 (0.6)	5.7	0.04 (S)
	Single/Nuclear	1907 (59.9)	1231 (38.6)	46 (1.5)		
Fathers Occupation	Business	288 (61.0)	179 (38.0)	5 (1.0)	23.6	0.00 3 (S)
	Farmer	328 (58.4)	220 (39.2)	14 (2.4)		
	Labour	1618	1046	20		

		(60.3)	(39.0)	(0.7)		
	Service	242 (55.1)	186 (42.4)	11 (2.5)		
	Unemployed	46 (63.0)	25 (34.3)	2 (2.7)		
Mothers Occupation	Business	9 (100.0)	0 (0.0)	0 (0.0)	16.2	0.03 (S)
	Farmer	19 (63.3)	11 (36.7)	0 (0.0)		
	Housewife	2222 (58.7)	1513 (40.0)	46 (1.3)		
	Labour	268 (66.3)	130 (32.2)	6 (1.5)		
	Service	4 (66.7)	2 (33.3)	0 (0.0)		

Above table represents that out of 4230 respondents more than half (58%) had gender stereotypical views whereas 40 percent scored moderately on gender stereotype scale. Very few respondents had liberal score on gender stereotype scale. The overall score depicts the conservative mindset of respondents.

The data presented in Table 4.9 elucidate the association between demographic variable and gender imbalance. The blocks which were selected under study depicted that more than half of the respondents (63.3%) from Kichha had typical view on Gender stereotyping followed respondents from Rudrapur (60.5%). Equal percentage of respondents (59.0%) from Gadarpur and Jaspur had typical view on Gender stereotyping. About 40.6 percent of respondents from Gadarpur had moderate view on gender stereotyping followed by respondents from Kashipur and Sitarganj Block i.e. 39.9 percent and 39.7 percent respectively. A very small percentage (2.7%) of respondents from Kashipur was found to have liberal view on gender stereotyping followed by equal percentage of respondents (1.8%) from Jaspur and Sitarganj. Statistically, the difference was found to highly significant.

Majority of the adolescents studying in various classes had typical view on gender stereotype roles which shows conservative mindset of our society. The data specific to class of respondents represents that majority of the respondents who were studying in class 10^{th} (70.4%) were found to have typical views regarding gender stereotyping followed by respondents studying in class 12^{th} (62.1%) and 11^{th} (60.6%). Moderate level views were expressed by maximum percentage of respondents from class 9^{th} (47.6%), 8^{th} (57.3%) and 7^{th} (40.7%). Only a small percentage of respondents from all classes had liberal view point regarding Gender

stereotyping. The difference was found to be statistically significant. Above presented data represents that upbringing and environment in which we live has a very important role in shaping our thinking. If we correlate above two findings it is very clear that place of living impacts our thinking.

According to the socio-cultural perspective of stereotyping, individuals learn stereotypes of different groups in their formative years from parents, teachers and significant adults in their lives as well as from the public media (Hamilton and Sherman, 1994). Study also supports the present finding which says that individuals learn stereotypes of different groups in their formative years from parents, teachers and significant adults in their lives as well as from the public media (Hamilton and Sherman, 1994).

Further, probing into the table regarding gender, age, religion and type of family the data asserts that majority of the males (76.2%) was found to have typical views on gender stereotype in comparison to females (43.6%). More than half of the females (54.1%) had moderate views in comparison to males (23.6%). A very low percentage of females (2.3%) were found to have liberal views. As per the data related to age about 60.1 percent of the respondents who had age less than 14 years of age were found to have moderate views in comparison to those respondents who had age more than 14 years (59.1%). Only 1.7 percent of respondents were found to have liberal views. We can say that as age increases individual become more mature and their thinking changes according to the approved norms of society. This may be the reason behind more conservative gender oriented thinking of individuals who were more than 14 years of age.

The data related to religion depicts that maximum percentage of respondents who were Muslim (65.2%) expressed typical views regarding gender stereotyping followed by Hindus (55.6%) and Punjabis (48.5%). The moderate level of views was expressed by Punjabi, Hindu and Muslim respondents i.e. 51.5%, 42.9% and 34.0% respectively. No Punjabi respondents expressed liberal view while a small percentage of Muslims (1.5%) and Hindus (0.8%) expressed liberal views but the percentage was very low. The data pertaining to type of family reveals that 59.9 percent of respondents who belonged to nuclear family had typical views than respondents living in joint families (58.8%). Moderate views were expressed more by respondents from joint family (40.6%) in comparison to nuclear family (38.6%). The liberal views were recorded for respondents belonging to nuclear family, though the percentage is low (1.5%). After studying the data regarding type of family and religion it can be concluded that that religion had a major role

in shaping individual gender stereotype thinking but the type of family (nuclear and joint) did not show any prominent impact.

The difference was found to be highly significant statistically in case of gender, age, religion and type of family.

The table regarding family income of respondents reflects that most of the respondents approximately more than 50 percent had typical view on gender stereotype irrespective of income. Very less percentage of respondents had liberal view on gender stereotype. 4.0 percent of respondents whose family had income more than 8000 was found to have liberal views while those (61.3%) who had income between 3000 to 8000 was found to have typical views regarding gender stereotype. It is very heartfelt to note that respondents who had family income below 1500 were found to have moderate views. Statistically, the result was found to be highly significant.

It was clearly depicted by the above table that Irrespective of their education most of the resp ondents had conservative gender stereotypical view. Further, probing into the gathered data it was f ound that mostly parents who are graduate, post graduate or having any technical degree had mo derate gender stereotype view compared to less educated individuals. Further, the gathered data p resents the data related to Father's and mother's education. All the respondents (100.0%) who ha d father's educated upto ITI were found to have moderate views regarding gender stereotyping fo llowed by around 31.7 percent of respondents whose fathers were uneducated. In case of mothers , the majority of the respondents (61.8%) who had uneducated mothers followed by mothers edu cated upto intermediate level was found to have typical gender stereotype views. Liberal views w as found in small percentage of respondents whose fathers were educated upto Masters (4.3%) w hile equal percentage of respondents (2.2%) expressed similar views whose mothers were educat ed upto Intermediate or B.A. level. 100 percent respondents expressed moderate views whose fat hers were educated upto MBA while the maximum percentage of respondents (47.7%) whose mo thers were educated up to Primary level expressed moderate views. The difference was found to be statistically significant. After analyzing the above table we can conclude that even though env ironment and significant people of our life influences our way of thinking and behaviour at the sa me time education also plays very crucial role in it.

The obtained data regarding fathers and mothers occupations depicts that majority of the respondents weather their parents are employed or unemployed had typical view on gender stereotype. Very little percentage of respondents had liberal view on gender stereotype. (63.0%)

who had unemployed father had typical gender stereotype views whereas a very small percentage (2.7%) of respondents who have unemployed father had liberal opinion on this topic. 42.4 percent of respondents who had service class fathers had moderate views while almost similar percentage of respondents (40.0%) whose mothers were housewives had similar views. Statistically, the difference was found to be significant.

Therefore, it is evident from the table that location, class, age, type of family, religion, gender, income, fathers and mother education and occupation has significant association with gender stereotyping.

At last we can conclude by understanding the fact that in the present century has marked an era of explicit socio-economic transformation where Indian women have risen above their traditional roles and strongly emerged as professional partners in Indian business. Despite their convincing surfacing in the business world, the male outlook does not seem to be changing fairly. Study conducted by Punia in 2005 brings out that not just the model of male manager, but also the very value of masculinity seems to be punctuated by women coming out at workplace and thereby affecting the entire industrial scenario. The study reveals that the Indian male managers are most comfortable while supervising women subordinates but have been found least fulfilled while being supervised by women managers shows the male dominance of Indian society.

SECTION 10:

KNOWLEDGE ON NEED AND IMPORTANCE OF CAREER COUNSELLING

In current times, career counselling is a need as most students pick commonly known domains as their career option. Career counselling is an effort for students' career guidance right from their school about the available career options as per their interest and stream of academics. Through career counselling, an analysis can be done for students which will help them to find out their interests and also their strengths and weaknesses. Career counselling should be done in the school itself for class 9-11 students specifically because these are the levels where students choose a particular stream as their specialization and also, it will be helpful for them to decide the stream they should opt for. This is because many students are not satisfied with the stream they choose and tend to change it; this happens in absence of proper guidance about options available as per their interest and different education stream. Even after knowing the importance of career counseling, there are many government and private schools in which there is no facility like career counseling. Even students are not aware about what is career counselling. So present study was planned to understand the views of student on need and importance of career counselling for them.

Table 4.10a: Association between views on career counselling and Demographic variables (Locale and Religion) of the respondents

S.No.	Questions	Responses	Blocks						Religio			Total Respondents n=4230
			G f (%)	J f (%)	Ka f (%)	Ki f (%)	R f (%)	S f (%)	H f (%)	M f (%)	P f (%)	
1.	Awareness on career counselling	Aware	417 (58.6)	411 (58.1)	449 (62.1)	394 (55.7)	405 (59.3)	407 (58.1)	1387 (58.0)	1077 (59.6)	19 (57.5)	2483 (58.7)
Chi^2			6.4						1.0			
p-value			0.26 (NS)						0.5 (NS)			
2.	Appropriate age to get career counselling	Before 15 yrs.	47 (11.2)	59 (14.3)	67 (14.9)	58 (14.7)	53 (13.0)	58 (14.2)	187 (13.5)	154 (14.3)	1 (5.3)	342 (13.8)
		15 to 25 yrs.	274 (65.8)	259 (63.0)	299 (66.6)	242 (61.5)	273 (67.5)	265 (65.1)	904 (65.2)	690 (64.1)	18 (94.7)	1612 (64.9)
		26 yrs. & above	96 (23.0)	93 (22.7)	83 (18.5)	94 (23.8)	79 (19.5)	84 (20.7)	296 (21.3)	233 (21.6)	0 (0.0)	529 (21.3)
Chi^2			8.9						8.1			
p-value			0.5 (NS)						0.08 (NS)			
3.	Resources available for career goal	Yes available	412 (57.9)	382 (54.0)	397 (54.9)	388 (54.8)	399 (58.4)	378 (54.0)	1370 (57.3)	967 (53.5)	19 (57.5)	2356 (55.7)
Chi^2			5.45						6.09			
p-value			0.3 (NS)						0.04 (S)			
4.	Advice on future goal	Teacher	193 (27.1)	172 (24.4)	187 (25.9)	165 (23.4)	180 (26.4)	169 (24.2)	615 (25.8)	442 (24.5)	9 (27.3)	1066 (25.2)
		Friends/Seniors	75 (10.5)	114 (16.1)	95 (13.2)	105 (14.9)	78 (11.4)	310 (16.4)	310 (12.9)	269 (14.9)	3 (9.0)	582 (13.8)
		Older siblings	96 (13.5)	114 (16.1)	94 (13.0)	113 (15.9)	87 (12.8)	113 (16.1)	359 (15.0)	252 (13.9)	6 (18.2)	617 (14.6)
		Mother / Father	347 (48.9)	307 (43.4)	346 (47.9)	324 (45.8)	338 (49.4)	303 (43.3)	1106 (46.3)	844 (46.7)	15 (45.5)	1965 (46.4)
Chi^2			30.5						5.14			
p-value			0.01 (S)						0.5(NS)			
5.	It provide knowledge on selected professions	Yes	516 (72.5)	438 (61.9)	525 (72.7)	459 (64.9)	490 (71.7)	436 (62.2)	1640 (68.6)	1191 (65.9)	33 (100)	2864 (67.7)
Chi^2			43.6						19.3			
p-value			0.001 (S)						0.001 (S)			
6.	It is imp. for all govt. & pvt. Schools	Yes imp.	514 (72.2)	407 (57.5)	524 (72.5)	430 (60.8)	478 (69.9)	418 (59.7)	1602 (67.0)	1138 (62.9)	31 (93.9)	2771 (65.5)
Chi^2			73.51						19.37			
p-value			0.001 (S)						0.001 (S)			

G- Gadarpur, J- Jaspur, Ka- Kashipur, Ki- Kichha, R- Rudrapur, H- Hindu, M- Muslim, P- Punjabi

The overall data signify that out of 4230 respondents, 2483 students were aware about career counselling i.e. 58.7%. Majority of the respondents (64.9%) asserted that the correct age of career counselling is between 15 to 25 years. More than half of the respondents (55.7%) revealed that career counselling helps them to avail resources for achieving career goals. About 46.4% i.e. 1965 respondents out of 4230 respondents choose their parents for receiving advice on future goals followed by 25.2% of respondents who preferred to take advice from their teachers (1066 respondents). Maximum percentage of respondents i.e. 67.7% and 65.5% specified that career counselling provide them information on selected profession and perceived the importance of career counselling for all the government and private schools respectively.

The data presented in Table 4.10a depicts the association between views on career counselling and demographic variables. Block and religion was not found to be associated with awareness on career counselling, age of career counselling. Almost equal percentage of respondents from Punjabi (57.5%) and Muslim families (57.3%) reported about the availability of resources for achieving career goals. The difference was found to be statistically significant. Further, block was not found to be associated with availability of resources for achieving career goals whereas religion was not found to be associated with advice on future goal. Majority of the respondents from all blocks specified that they like to take advice from their parents regarding their future goals followed by advice from their teachers. Maximum percentage of respondents from Rudrapur (49.4%) followed by respondents from Gadarpur (48.9%) preferred their parents for taking advice on future goals. About 27.1% and 26.4% of the respondents from Gadarpur and Rudrapur respectively had preference for their teachers. Respondents from Sitarganj and Jaspur i.e. 16.4% and 16.1% approached their friends/seniors for advice on future goals. Equal percentage of respondents (16.1%) from Jaspur and Sitarganj followed by 15.9% of the respondents from Kichha had preference for their older siblings. The difference was found to be significant at 0.05 level of significance. Majority of the respondents from Kashipur (72.7%) and Gadarpur (72.5%) reported that career counselling provide them knowledge on selected profession. As far as religion is concerned about 68.6% and 65.9% of the respondents who belonged to Hindu and Muslim families respectively asserted that career counselling provide them information on selected profession. The difference was found to be highly significant. Almost equal percentage of respondents from Kashipur (72.5%) and Gadarpur (72.2%) highlighted the importance of career counselling for all government and private schools followed by 69.9% and 60.8% of the respondents from Rudrapur and Kichha respectively. Majority of the respondents from Punjabi families (93.9%) and Hindu families mentioned the importance of career counselling for all government and private schools. Locale and religion was found to be significantly associated with views on career counselling.

Overall, it can be concluded that block was not found to be significantly associated with awareness on career counselling, age of career counselling and availability of resources for achieving career goals whereas it was found to be significantly associated with advise on future goals, providing knowledge on selected profession and importance of career counselling for all the government and private schools. Variable religion was found to be non-significantly associated with awareness on career counselling, age of career counselling and advice on future goals while it was found to be significantly associated with availability of resources for achieving career goals, providing knowledge on selected profession and importance of career counselling for all the government and private schools. The study which was conducted on also a sample of 130 students from the College of Political, Administrative and Communication Science, Babes-Bolyai University Cluj-Napoca also found that students are poorly informed about job opportunities, their expectations for the future are not connected with their own knowledge and abilities, they do not have a coherent career plan and encounter major barriers in the career decision process. They expressed the need of career counselling. The results are important for career counsellors and government and private institution as they can be used in the development of career guidance programs in the schools and university environment.

more than 14 years had more awareness on career counselling in comparison to those respondents whose age was less than 14 years (57.0%). Females (60.3%) had more awareness regarding career counselling in comparison to males (56.9%). Statistically, the difference was found to be significant. Fouad et al. (2006) Investigated in his study that there is a need of awareness and use of counseling services among students.

Age was not found to be significantly associated with age of career counselling, availability of resources for achieving career goals, advice on future goals and providing knowledge on selected profession. Majority of the female respondents (71.9%) reported that the appropriate age for career counselling is 15 to 25 years in comparison to their counterparts (57.1%). Around 26.2% and 16.7% of the males respondents stated that the age of career counselling is 26 years or above and before completing 15 years respectively. About 58.9% of the females reported that through career counselling they avail resources for achieving career goals. More than half of the female respondents (59.1%) highlighted that while deciding future goals they like to take advice of their parents in comparison to 33.2% of the male respondents. About 29.2% of the males preferred their teachers for advice followed by friends and seniors (20.0%). Maximum percentage of female respondents (74.8%) believed that career counselling provide them knowledge on selected profession in contrast to males (60.2%). The difference was found to be significant.

Table 4.10b: Association between demographic variables (Age and Gender) and views on career counseling

S.No.	Questions		Age		Gender	
1.	Awareness on career counselling	Yes	<14 years f (%)	> 14 years f (%)	Female f (%)	Male f (%)
			1236 (57.0)	1247 (60.4)	1303 (60.3)	1180 (56.9)
Chi^2			4.9		4.9	
p-value			0.02 (S)		0.02 (S)	
2.	Age of career counselling	Before 15 yrs	180 (14.6)	162 (12.9)	146 (11.2)	196 (16.7)
		15 to 25 yrs	785 (63.5)	827 (66.4)	938 (71.9)	674 (57.1)
		26 yrs & above	271 (21.9)	258 (20.7)	219 (16.9)	310 (26.2)
Chi^2			2.3		60.2	
p-value			0.3 (NS)		0.001 (S)	
3.	Resources for achieving goal	Yes	1192 (55.0)	1164 (56.4)	1273 (58.9)	1083 (52.2)
Chi^2			0.79		19.05	
p-value			0.3 (NS)		0.001 (S)	
4.	Advice on future goal	Teacher	541 (24.9)	525 (25.4)	463 (21.4)	603 (29.2)
		Friends/Seniors	320 (14.8)	262 (12.7)	166 (7.7)	416 (20.0)
		Older siblings	293 (13.5)	324 (15.8)	254 (11.8)	363 (17.6)
		Mother / Father	1012 (46.8)	953 (46.1)	1276 (59.1)	689 (33.2)
Chi^2			6.8		318.6	
p-value			0.07 (NS)		0.001 (S)	
5.	Provide knowledge on selected profession	Yes	1458 (67.3)	1406 (68.1)	1616 (74.8)	1248 (60.2)
Chi^2			0.31		102.8	
p-value			0.5 (NS)		0.001 (S)	
6.	Imp. for gov. & pvt. Schools	Yes imp.	1359 (62.7)	1412 (68.4)	1683 (77.9)	1088 (52.5)
Chi^2			15.02		302.24	
p-value			0.001 (S)		0.001 (S)	

The data in table 4.10b reflects the association between views on career counselling and demographic variables i.e. age and gender. Maximum percentage of respondents whose age was

Importance of career counselling in all government and private schools was expressed by 68.4% of the respondents whose age was more than 14 years in contrast to those respondents whose age was less than 14 years (62.7%). Majority of the female respondents (77.9%) highlighted the importance of career counselling in all government and private schools (52.5%). The difference was found to be highly significant.

Thus, it is pertinent from the table that age was significantly associated with awareness on career counselling and importance of career counselling for all the government and private schools while age was not significantly associated with age of career counselling, availability of resources for achieving career goals, advice on future goals and providing knowledge on selected profession. With reference to gender, the gender was found to be significantly associated with views on career counselling.

Data in Table 4.10d depicts the association between demographic variables (family income and type of family) and views on career counselling. Majority of the respondents (65.7%) whose family income was between 1500 to 3000 had more awareness on career counselling followed by those respondents whose income was more than 8000 (64.3%). Above sixty percent of the respondents whose income was between 3000 to 8000 (69.2%) and more than 8000 (67.5%) highlighted that age of career counselling between 15 to 25 years is appropriate. About 25.0% and 23.1% of the respondents whose income was less and 1500 and between 1500 to 3000 respectively emphasized that 26years and above is the appropriate age for career counselling. Career counselling if provided before completing the age of 15 years will be more promising as stated by 15.9% and 15.7% of those respondents whose family income was between 3000 to 8000 and 1500 to 3000 respectively. Almost equal percentage of respondents from nuclear (64.9%) and joint families (64.8%) stated that 15 to 25 years is the apt age for receiving career counselling. Around 22.2% of the respondents from nuclear families expressed that 26 years and above is the advantageous age for receiving career counselling while on the other hand 16.4% of the respondents from joint families believed that career counselling if provided before completing 15 years, will be more beneficial. The difference was found to be statistically significant.

Table 4.10c: Association between demographic variables (Family Income and Type of Family) and views on Career counseling

S.No.	Questions		Family Income				Type of Family	
1.	Awareness on career counselling		<1500 f (%)	1500 - 3000 f (%)	3000 - 8000 f (%)	>8000 f (%)	Joint f (%)	Nuclear f (%)
		Yes	476 (51.5)	600 (65.7)	574 (56.9)	491 (64.3)	625 (59.7)	1858 (58.3)
Chi^2			49.17				0.63	
p-value			0.001 (S)				0.4 (NS)	
2.	Age of career counseling	Before completing 15 years	62 (13.0)	94 (15.7)	91 (15.9)	54 (11.0)	102 (16.4)	240 (12.9)
		15 to 25 years	304 (63.9)	356 (59.3)	397 (69.2)	331 (67.5)	405 (64.8)	1207 (64.9)
		26 years & above	110 (23.1)	150 (25.0)	86 (14.9)	106 (21.5)	118 (18.8)	411 (22.2)
Chi^2			26.5				6.23	
p-value			0.001 (S)				0.04 (S)	
3.	Resources available for career goal	Yes	530 (57.3)	508 (55.6)	554 (54.9)	445 (58.3)	592 (56.6)	1764 (55.4)
Chi^2			2.55				0.45	
p-value			0.46 (NS)				0.50 (NS)	
4.	Advice on future goal	Teacher	183 (19.9)	235 (25.7)	278 (27.6)	205 (26.9)	284 (27.2)	782 (24.6)
		Friends/Seniors	96 (10.3)	148 (16.3)	135 (13.4)	134 (17.5)	138 (13.2)	444 (13.9)
		Older siblings	125 (13.5)	128 (14.0)	157 (15.6)	114 (14.9)	134 (12.8)	483 (15.1)
		Mother / Father	520 (56.3)	402 (44.0)	438 (43.4)	310 (40.7)	490 (46.8)	1475 (46.4)
Chi^2			62.09				5.46	
p-value			0.001 (S)				0.14(NS)	
5.	Providing knowledge on selected profession	Yes	650 (70.3)	609 (66.7)	666 (66.0)	543 (71.1)	735 (70.2)	2129 (66.8)
Chi^2			8.06				4.16	
p-value			0.04 (S)				0.04 (S)	
6.	Imp. for all the gov. & pvt. Schools	Yes	643 (69.5)	542 (59.3)	639 (63.3)	505 (66.1)	670 (64.0)	2101 (65.9)
Chi^2			22.4				1.30	
p-value			0.001 (S)				0.25 (NS)	

Type of family was not found to be significantly associated with awareness on career counselling, availability of resources for achieving career counselling, advice on future goal and importance of career counselling for all government and private schools. Availability of resources for achieving career goals was not found to be associated with family income.

More than half of the respondents whose family income was less than 1500 (56.3) preferred to take advice from their parents followed by 44.0% of the respondents whose income was between 1500 to 3000. 27.6% and 26.9% of the respondents whose family income was between 3000 to 8000 and more than 8000 respectively preferred their teachers for advice on future goals. Similar trend was observed in case of preference for older siblings as well. Friends/seniors were opted for advice by 17.5% and 16.3% of the respondents whose family income was more than 8000 and between 1500 to 3000. Majority of the respondents (71.1%) whose family income was more than 8000 stated that career counselling provide knowledge on selected profession followed by those respondents whose family income was less than 1500. Majority of the respondents (70.2%) who belonged to joint families responded that career counselling provide knowledge on selected profession. Importance of career counselling in all government and private schools was expressed by those respondents whose family income was less than 1500 (69.5%) followed by those respondents whose family income was more than 8000 (66.1%). The difference was found to be significant.

Therefore, it can be concluded that family income was found to be significantly associated with all the views on career counselling except for availability of resources for achieving career goals which was found to be not associated while on the other hand type of family was found to be non-significantly associated with views on career counselling except for age of career counselling and providing knowledge on selected profession which was found to be associated with type of family.

Table 4.10d: Association between parental occupation and views on career counselling

S.No	Questions		Father's Occupation					Mother's Occupation				
	Awareness on career counselling		B f (%)	F f (%)	L f (%)	S f (%)	UE f (%)	B f (%)	F f (%)	HW f (%)	L f (%)	S f (%)
		Yes	276 (58.4)	350 (62.2)	1531 (57.0)	280 (63.7)	46 (63.0)	8 (88.8)	21 (70.0)	2198 (58.1)	255 (63.1)	1 (16.6)
Chi^2			11.25					13.09				
p-value			0.02 (S)					(S)				
	Age of career counselling	Before completing 15 years	55 (19.9)	41 (11.7)	196 (12.8)	48 (17.1)	2 (4.3)	4 (50.0)	1 (4.8)	310 (14.1)	27 (10.6)	0 (0.0)
		15 to 25 years	161 (58.4)	243 (69.5)	1007 (65.7)	176 (62.8)	25 (54.3)	4 (50.0)	17 (80.9)	1442 (65.6)	148 (58.0)	1 (100)
		26 years & above	60 (21.7)	66 (18.8)	328 (21.5)	56 (20.1)	19 (41.4)	0 (0.0)	3 (14.3)	446 (20.3)	80 (31.4)	0 (0.0)
Chi^2			28.95					29.9				
p-value			0.001 (S)					(S)				
3.	Resources for career goal	Yes	257 (54.4)	292 (51.9)	1517 (56.5)	233 (53.0)	57 (78.0)	5 (55.5)	13 (43.3)	2087 (55.2)	248 (61.3)	3 (50.0)
Chi^2			20.26					7.61				
p-value			0.001 (S)					(NS)				
	Advice on future goal	Teacher	121 (25.6)	133 (23.6)	696 (25.9)	110 (25.0)	6 (8.2)	1 (11.1)	9 (30.0)	978 (25.9)	77 (19.1)	1 (16.7)
		Friends/Seniors	63 (13.4)	80 (14.2)	350 (13.1)	82 (18.6)	7 (9.6)	1 (11.1)	0 (0.0)	536 (14.2)	43 (10.7)	2 (33.3)
		Older siblings	83	79	366	80	9	0	2	546	69	0

			(17.5)	(14.1)	(13.6)	(18.3)	(12.4)	(0.0)	(6.7)	(14.4)	(17.0)	(0.0)
		Mother / Father	205 (43.5)	270 (48.1)	1272 (47.4)	167 (38.1)	51 (69.8)	7 (77.8)	19 (63.3)	1721 (45.5)	215 (53.2)	3 (50.0)
Chi^2			45.2					30.7				
p-value			0.001 (S)					0.002(S)				
5.	Providing knowledge on selected profession	Yes	317 (67.1)	364 (64.7)	1881 (70.0)	246 (56.0)	56 (76.7)	8 (88.8)	22 (73.3)	2546 (67.3)	284 (70.3)	4 (66.6)
Chi^2			39.2					3.76				
p-value			0.001 (S)					0.43 (NS)				
6.	It's Importance for all the gov. & pvt. Schools	Yes	290 (61.4)	381 (67.7)	1776 (66.1)	261 (59.4)	63 (86.3)	4 (44.4)	20 (66.6)	2450 (64.8)	292 (72.2)	5 (83.3)
Chi^2			26.3					11.6				
p-value			0.001 (S)					0.02 (S)				

B- business, F- farming, L- labour, S –service, UE- unemployed, HW-House-wife

The data presented in Table 4.10d reflects association between parental occupation and views on career counselling. Almost equal percentage of respondents whose father's occupation was service (63.7) or respondents whose fathers were either unemployed (63.0%) reported that they had awareness about career counselling. About 62.2% and 58.4% of the respondents whose fathers were farmers and running their own business respectively had awareness about career counselling. Majority of the respondents (88.8%) whose mothers were doing business followed by those respondents whose mothers were farmers (70.0%) had awareness on career counselling. The difference was found to be significant.

Majority of the respondents whose fathers were employed as farmer (69.5%) followed by those respondents whose fathers were working as labour (65.7%) asserted that 15 to 25 years is the age of career counselling. 41.4% of the respondents whose fathers were unemployed and 21.7% of the respondents whose fathers were running their own business stated that 26 years and above is the appropriate age for career counselling. The respondents whose fathers were running their own business (19.9%) followed by service class fathers (17.1%) highlighted that before completing the age of 15 years is the age for career counselling. Further probing into the mother occupation, it is pertinent from the table that 100% of the respondents and 80.9% of the respondents whose mothers were engaged in service and farming respectively stated that 15 to 25 years is the apt age for career counselling. Fifty percent of the students whose mother's profession was business believed that before completing 15 years is the age of career counselling. 26 years and above is the age best suitable for career counselling is highlighted by 31.4% and 20.3% of the respondents whose mothers were labour and housewives respectively. The difference was found to be statistically significant.

Mother's occupation was not found to be significantly associated with availability of resources for achieving career goals. Majority of the respondents whose fathers were unemployed (78.0%) followed by those respondents whose fathers were working as labour (56.5%) acknowledged that through career counselling they avail resources for achieving their career goals. Statistically, the difference was found to be significant.

Maximum percentage of the respondents (69.8%) whose fathers were unemployed followed by 48.1% of those respondents whose fathers' occupation was farming liked to take advice from their parents. Teachers as an advisor on future goals were preferred by 25.9% and 25.6% of respondents whose fathers were engaged in business and labour respectively. About 18.3% and 17.5% of the respondents whose father's occupation was service and business respectively wished to take advice from their older siblings. Friends/seniors were opted for advice by 18.6% and 14.2% of the respondents whose father's occupation was service and

farming respectively. The majority of the respondents whose mother's occupation was business (77.8%) and farming (63.3%) preferred their parent's advice on future goals. Friends/seniors were opted by 33.3% of the respondents whose mothers were engaged in services. 30.0% and 25.9% of the respondents whose mothers were occupied as housewives and farmer respectively choose their teachers as an advisor for future goals. Preference for older siblings as an advisor was given by 17.0% and 14.4% of the respondents whose mother's occupation was labour and housewives respectively. The difference was found to be statistically significant. Many study also found that Face to face career guidance and counselling is effective and important aspect of life. It can make or break career. Career counselling represents an important variable to better understand career intervention underlying mechanisms. The trend of career guidance in India is not satisfactory. Jain 2007 study is focused on finding of impacts of career guidance and counseling on students regarding career development. His study indicates that 23% doctors, 17% engineers, 22% Chartered accountants, 14% managers, 23% software engineers, 27% architects, 24% interior decorators, 21% dress designers, 13% teachers and 16% lawyers are impacted by career counselling and they took decision of career after guidance of career counsellor. So it is very clear from the above study that there is a significant effect of career guidance and counselling on student's career development is accepted.

Career counselling provides knowledge on selected profession was not found to be significantly associated with mother occupation. As far as father occupation is concerned majority of the respondents (76.7%) whose fathers were unemployed reported that career counselling provide them knowledge on selected profession followed by those respondents whose fathers were working as labour i.e. 70.0%. The difference was found to be statistically significant at 0.001 level of significance.

Majority of the respondents whose fathers (86.3%) and mothers (83.3%) were unemployed reported that career counselling is important for all the private and government schools followed by 72.2% and 67.7% of the respondents whose mothers and fathers occupation was labour and farming respectively. The difference was found to be statistically significant.

In nutshell, thus conclusion drawn for the table can be expressed as follows:

Statistically, father's occupation was found to be significantly associated with views on career counselling while on the other hand mother occupation was not found to be significantly associated with availability of resources for achieving career goals and providing knowledge on selected profession.

Table 4.10e: Association between parental education and views on career counselling

S.No.	Questions		Father's Education						Mother's Education			
	Awareness on career counselling		**G f (%)**	**ITI f (%)**	**MBA**	**M f (%)**	**P f (%)**	**6 to 12th f (%)**	**BA f (%)**	**P f (%)**	**UE f (%)**	**6 - 12th f (%)**
		Yes	35 (54.7)	2 (66.6)	0 (0.0)	27 (57.5)'	385 (54.9)	954 (64.7)	639 (51.7)	71 (80.7)	259 (59.4)	1123 (54.4)
Chi^2			55.6						47.14			
p-value			0.001 (S)						0.001 (S)			
2.	Age of career counseling	Before completing 15 years	6 (17.2)	2 (100.0)	-	0 (0.0)	43 (11.2)	154 (16.1)	98 (15.3)	3 (4.2)	59 (22.8)	148 (13.2)
		15 to 25 years	25 (71.4)	0 (0.0)	-	18 (66.7)	267 (69.3)	636 (66.7)	365 (57.2)	62 (87.3)	158 (61.0)	699 (62.2)
		26 years & above	4 (11.4)	0 (0.0)	-	9 (33.3)	75 (19.5)	164 (17.2)	176 (27.5)	6 (8.5)	42 (16.2)	276 (24.6)
Chi^2			Chi^2						51.6			
p-value			p-value						0.001 (S)			
3.	Resources for achieving career goal	Yes	33 (51.6)	0 (0.0)	4 (100.0)	30 (63.8)	412 (58.7)	841 (57.0)	643 (52.1)	56 (63.6)	257 (58.9)	1093 (52.9)
Chi^2			19.13						14.96			
p-value			0.004 (S)						0.002 (S)			
4.	Advice on future goal	Teacher	14 (21.9)	2 (66.7)	0 (0.0)	8 (17.0)	168 (23.9)	373 (25.3)	299 (24.1)	11 (12.5)	130 (29.8)	498 (24.1)
		Friends/Seniors	20 (31.3)	1 (33.3)	0 (0.0)	9 (19.2)	90 (12.9)	195 (13.3)	155 (12.6)	9 (10.2)	37 (8.5)	260 (12.6)
		Older siblings	16 (25.0)	0 (0.0)	0 (0.0)	9 (19.2)	86 (12.3)	211 (14.3)	151 (12.2)	23 (26.1)	33 (7.6)	285 (13.8)
		Mother / Father	14 (21.8)	0 (0.0)	4 (100.0)	21 (44.6)	357 (50.9)	696 (47.1)	631 (51.1)	45 (51.2)	236 (54.1)	1022 (49.5)
Chi^2			51.09						51.4			
p-value			0.001 (S)						0.001(S)			
5.	Providing knowledge on selected profession	Yes	42 (65.6)	2 (66.7)	4 (100.0)	32 (68.1)	441 (62.9)	1080 (73.2)	832 (67.3)	72 (81.8)	294 (67.4)	1383 (66.9)
Chi^2			28.1						20.46			
p-value			0.001 (S)						0.001 (S)			
6.	Imp. of career counselling for all the gov. & pvt. Schools	Yes	47 (73.4)	3 (100.0)	4 (100.0)	38 (80.8)	477 (68.1)	1004 (68.1)	799 (64.6)	68 (77.3)	298 (68.4)	1383 (66.9)
Chi^2			12.91						6.53			

p-value			0.04 (S)						0.08 (NS)			
7.	Age of career counseling	Before completing 15 years	6 (17.2)	2 (100.0)	-	0 (0.0)	43 (11.2)	154 (16.1)	98 (15.3)	3 (4.2)	59 (22.8)	148 (13.2)
		15 to 25 years	25 (71.4)	0 (0.0)	-	18 (66.7)	267 (69.3)	636 (66.7)	365 (57.2)	62 (87.3)	158 (61.0)	699 (62.2)
		26 years & above	4 (11.4)	0 (0.0)	-	9 (33.3)	75 (19.5)	164 (17.2)	176 (27.5)	6 (8.5)	42 (16.2)	276 (24.6)
		15 to 25 years	25 (71.4)	0 (0.0)	-	18 (66.7)	267 (69.3)	636 (66.7)	365 (57.2)	62 (87.3)	158 (61.0)	699 (62.2)
Chi^2			51.6						53.0			
p-value			0.001 (S)						0.001 (S)			
8.	Resources for achieving career goal	Yes	33 (51.6)	0 (0.0)	4 (100)	30 (63.8)	412 (58.7)	841 (57.0)	643 (52.1)	56 (63.6)	257 (58.9)	1093 (52.9)
Chi^2			19.13						14.96			
p-value			0.004 (S)						0.002 (S)			
9.	Advice on future goal	Teacher	14 (21.9)	2 (66.7)	0 (0.0)	8 (17.0)	168 (23.9)	373 (25.3)	299 (24.1)	11 (12.5)	130 (29.8)	498 (24.1)
		Friends/Seniors	20 (31.3)	1 (33.3)	0 (0.0)	9 (19.2)	90 (12.9)	195 (13.3)	155 (12.6)	9 (10.2)	37 (8.5)	260 (12.6)
		Older siblings	16 (25.0)	0 (0.0)	0 (0.0)	9 (19.2)	86 (12.3)	211 (14.3)	151 (12.2)	23 (26.1)	33 (7.6)	285 (13.8)
		Mother / Father	14 (21.8)	0 (0.0)	4 (100)	21 (44.6)	357 (50.9)	696 (47.1)	631 (51.1)	45 (51.2)	236 (54.1)	1022 (49.5)
Chi^2			51.09						51.4			
p-value			0.001 (S)						0.001(S)			
10.	Providing knowledge on selected profession	Yes	42 (65.6)	2 (66.7)	4 (100)	32 (68.1)	441 (62.9)	1080 (73.2)	832 (67.3)	72 (81.8)	294 (67.4)	1383 (66.9)
Chi^2			28.1						20.46			
p-value			0.001 (S)						0.001 (S)			
11.	Imp. for all the gov. & pvt. Schools	Yes	47 (73.4)	3 (100.0)	4 (100.0)	38 (80.8)	477 (68.1)	1004 (68.1)	799 (64.6)	68 (77.3)	298 (68.4)	1383 (66.9)
Chi^2			12.91						6.53			
p-value			0.04 (S)						0.08 (NS)			

G- graduation, M- masters, P- primary, UE- un-educated

The data shown in Table 4.10d reflects the association between parental education and views on career counselling. Maximum percentage of respondents i.e. 66.6% and 64.7% whose fathers were educated upto ITI and 6 to 12th reported that they had awareness on career counselling. The awareness on career counselling was reported by maximum percentage of those respondents whose mothers were educated upto BA (80.7%) and 6 to 12th (64.9%). The difference was found to be statistically significant.

The age of career counselling is 15 to 25 years was highlighted by majority of the respondents whose fathers had done graduation (71.4%) followed by 69.3% of the respondents whose fathers were educated upto primary level. 33.3% and 27.5% of the respondents whose fathers were educated upto masters and uneducated respectively stated that 26years and above is the age of career counselling. The counselling should be provided before the age of 15 years was suggested by 17.2% and 16.1% of the respondents whose fathers were educated upto graduation and 6 to 12th respectively. As far as mother education is concerned, the majority of the respondents whose mothers were educated upto BA (87.3%) and 6 to 12th (70.7%) highlighted that the age for career counselling is 15 to 25 years. 24.6% of the respondents whose mothers were uneducated believed that the age of career counselling is 26 years and above while on the other hand 22.8% of the respondents whose mothers were educated upto primary level stated that before completing the age of 15 years is the appropriate age for career counselling. The difference was found to be statistically significant at 0.001 level of significance.

Maximum percentage of respondents whose fathers were educated upto masters (63.8%) and primary level (58.7%) specified that career counselling helps them to avail resources for achieving career goals whereas 63.6% and 59.3% of the respondents whose mothers were educated upto BA and 6 to 12th respectively stated the same. The difference was found to be statistically significant.

Maximum percentage of respondents (66.7%) whose fathers were educated upto ITI selected their teachers for advice on future goals. More than half of the respondents whose fathers were uneducated (51.1%) or educated upto primary level (50.9%) desired to take advice from their parents on future goals. The respondents whose fathers were educated upto ITI (33.3%) and Graduation (31.3%) opted to take advice from their friends/seniors. Older siblings for advice were preferred by 25.0% and 19.2% of the respondents whose fathers were educated upto graduation and masters respectively. More than half of the respondents whose mothers

were educated upto Primary (54.1%) and BA (51.2%) preferred their parents for advice on future goals. 29.8% respondents whose fathers were educated upto primary level opted their teachers as an advisor while on the other hand 26.1% of the respondents whose mothers were educated upto BA desired to take advice from their older siblings. Friends/ seniors as an advisor was preferred by 15.9% and 12.6% of the respondents whose mothers were educated upto 6 to 12^{th} and uneducated respectively. The difference was found to be significant.

Majority of the respondents (73.2%) whose fathers were educated upto 6 to 12^{th} followed by those respondents whose fathers were educated upto masters (68.1%) asserted that career counselling provide knowledge on selected profession. The maximum percentage of respondents (81.8%) whose mothers were educated upto BA and 6 to 12^{th} (73.8%) believed that career counselling provide knowledge on selected profession. The difference was found to be statistically significant.

Importance of career counselling for all the government and private schools was found to be non-significantly associated with mothers' education. All the respondents (100.0%) whose fathers had done ITI and MBA stated that career counselling is important for all the government and private schools followed by those respondents whose fathers had done masters. The difference was found to be significant at 0.04 level of significance.

So, the overall tables reflects that fathers education was found to be significantly associated with views on career counselling while on the other hand mothers education was not found to significantly associated with importance of career counselling for all the government and private schools.

SECTION 11: KNOWLEDGE ON LEADERSHIP SKILLS

Life skills are basically the psychosocial skills which include personal, social, interpersonal, cognitive and affective components of an individual. For a better life one needs to have better decision making and problem solving skills. If any individual posses these characteristics then his/her tasks of making his/her leadership effective also becomes easy. Present study aims to see need of life skills on problem solving and decision making attitude of school level leaders. For this purpose, approximately 4000 adolescent students studying in different classes from 7^{th} to 12^{th} were selected from different schools of Udham singh nagar,

studying in different government schools. It is a need assessment study which will help in understanding the need of life skill education for adolescents and its relationship with leadership skills. After collecting the data from students on leadership skill which is one component of life - skill the data were analyzed interpreted and presented below.

Table 4.11: Association between demographic variable and leadership skills

Variables		**Poor f (%)**	**Average f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total respondents N = 4230		136 (3.21)	2715 (64.18)	1379 (32.60)		
Block	Gadarpur	24 (3.4)	422 (59.4)	265 (37.2)	31.6	0.001 (S)
	Jaspur	24 (3.4)	485 (68.6)	198 (28.0)		
	Kashipur	17 (2.3)	452 (62.6)	253 (35.1)		
	Kichha	26 (3.7)	474 (67.0)	207 (29.3)		
	Rudrapur	24 (3.5)	407 (59.5)	252 (37.0)		
	Sitarganj	21 (3.0)	475 (67.9)	204 (29.1)		
Class	7th	19 (2.7)	435 (63.0)	238 (34.3)	60.7	0.001 (S)
	8th	32 (4.1)	551 (70.6)	197 (25.3)		
	9th	28 (4.2)	461 (69.8)	171 (26.0)		
	10th	18 (2.6)	424 (61.3)	250 (36.1)		
	11th	28 (3.9)	421 (59.9)	254 (36.2)		
	12th	11 (1.6)	423 (60.1)	269 (38.3)		
Gender	Female	85 (4.1)	1605 (77.5)	381 (18.4)	373.1	0.001 (S)
	Male	51 (2.4)	1110 (51.4)	998 (46.2)		
Age	Less than or equal to14 years	82 (3.8)	1433 (66.2)	651 (30.0)	16.0	0.001 (S)
	Greater than 14 years	54 (2.6)	1282 (62.1)	728 (35.3)		
Income	Less than 1500	24 (2.6)	590 (63.8)	310 (33.6)	61.3	0.001 (S)
	1501-3000	36	617	260		

		(4.0)	(67.5)	(28.5)		
	3001 to 8000	37 (3.6)	669 (66.4)	302 (30.0)		
	More than 8001	25 (3.3)	492 (64.5)	246 (32.2)		
Religion	Hindu	89 (3.7)	1508 (63.1)	793 (33.2)	28.4	0.001 (S)
	Muslim	46 (2.5)	1198 (66.3)	563 (31.2)		
	Punjabi	1 (3.0)	9 (27.3)	23 (69.7)		
Fathers Education	Graduation	1 (1.6)	43 (67.2)	20 (31.2)	43.0	0.001 (S)
	ITI	0 (0.0)	3 (100.0)	0 (0.0)		
	MBA	0 (0.0)	0 (0.0)	4 (100.0)		
	Master	0 (0.0)	21 (44.6)	26 (55.4)		
	Primary	32 (4.5)	445 (63.5)	224 (32.0)		
	Six to Intermediate	52 (3.5)	900 (61.0)	523 (35.5)		
	Uneducated	29 (2.3)	845 (68.4)	362 (29.3)		
Mothers Education	BA	5 (5.7)	43 (48.8)	40 (45.5)	38.5	0.001 (S)
	Primary	9 (2.0)	290 (66.5)	137 (31.5)		
	Uneducated	46 (2.2)	1347 (65.2)	672 (32.6)		
	Six to Intermediate	40 (4.6)	486 (56.4)	336 (39.0)		
Type of Family	Joint	28 (2.7)	646 (61.8)	372 (35.5)	6.2	0.04 (S)
	Single/Nuclear	108 (3.4)	2069 (65.0)	1007 (31.6)		
Fathers Occupation	Business	9 (1.9)	319 (67.5)	144 (30.6)	56.7	0.001 (S)
	Farmer	13 (2.3)	344 (61.2)	205 (36.5)		
	Labour	88 (3.3)	1701 (63.4)	895 (33.3)		
	Service	5 (6.8)	28 (38.4)	40 (54.8)		
	Unemployed	21 (4.8)	323 (73.6)	95 (21.6)		

Mothers Occupation	Business	0 (0.0)	4 (44.4)	5 (55.6)	30.7	0.001 (S)
	Farmer	0 (0.0)	15 (50.0)	15 (50.0)		
	Housewife	108 (2.9)	2425 (64.1)	1248 (33.0)		
	Labour	28 (6.9)	266 (65.9)	110 (27.2)		
	Service	0 (0.0)	5 (83.3)	1 (16.7)		

The obtained data in Table 4.11 presents the association between demographic variable and leadership skills. From all the surveyed respondents more than 60 percent had average level of leadership skills and more than 30 percent possess good leadership skills. Very little percentage of respondents had poor leadership skills. The locale of the study reflects that respondents from Gadarpur (37.2%) had good leadership skills followed by respondents from Rudrapur (37.0%) and Kashipur (35.1%). Majority of the respondents from Jaspur block (68.6%) were found to have average level of knowledge, followed by Sitarganj (67.9%) and Kichha block (67.0%). The difference was found to be highly significant.

The data gathered regarding class of respondents revels that maximum percentage of respondents who were studying in higher classes such as 12^{th} (38.3%) were found to posses better leadership skills followed by respondents from class 11^{th} (36.2%) and class 10^{th} (36.1%). The respondents who were in classes 7^{th} (4.2%) and 8^{th} (4.1%) were found to have poor leadership skills. Majority of the respondents from class 7^{th}, 8^{th} and 9^{th} had average level of leadership skills which was respectively (70.6%), (69.8%) and (63.0%). The difference was found to be statistically significant. Present analysis proves that as age increases leadership quality in individual also increases.

The data captured related to gender reflects that maximum percentage of males (46.2%) posses good level of leadership skills in comparison to their counterparts (18.4%). However, majority of the female respondents (77.5%) were found to posse's average level of leadership skills in comparison to male respondents (51.4%). As per the data related to age of respondents, it was found that maximum percentage of respondents (35.3%) whose age was more than 14 years were posses better leadership skill in comparison to respondents who were younger than them i.e. less than 14 years of age (30.0%).

Existing research has investigated gender differences in leadership experiences and behaviors (Cress et al., 2001; Dugan et al., 2008; Kezar & Moriarty, 2000; Tillapaugh & Haber-Curran, 2016). As a socially constructed identity, an individual's gender can influence their leadership experiences and interactions with others. On the contrary, a study from Kezar and Moriarty (2000) suggested women demonstrate lower leadership aspirations and leadership efficacy than their male peers. Caucasian and African American men scored higher on self-report measures of their leadership ability than Caucasian and African American women (Kezar & Moriarty, 2000). In an another study Rosch, Stephens, and Collins (2016) examined college students' developmental gains in their leadership capacity, measured by their leadership skill, leader self-efficacy, and motivation to lead, using a three-phase longitudinal approach. Women reported lower scores on transformational leadership and leader self-efficacy when compared to men on the pre-test (Rosch et al., 2016). After the program, both women and men demonstrated significant gains in all three measures of leadership capacity when compared to their respective pre-test scores (Rosch et al., 2016). Above discussed studies supports the present research findings which also depicted somewhat similar results.

The data pertaining to religion of the respondents signifies that majority of the respondents (69.7%) who belonged to Punjabi religion were found to have high leadership skills followed by respondents from Hindu religion (33.2%) and Muslim religion (31.2%). The maximum percentages of Muslims (66.3%) were found to have average leadership skills followed by respondents belonging to Hindu (63.1%) and Punjabi Religion (27.3%).

The difference was found to be highly significant statistically in case of gender, age and religion.

Further probing into the table regarding the family income of respondents reflects that the maximum percentage of respondents (33.6%) who had family income less than 1500 were found to have high leadership skills followed by those respondents (32.2%) who had family income more than 8000. More than half of the respondents (67.5%) who had family income between 1501 to 3000 were found to have average level of leadership skills followed by those respondents (66.4%) who had family income between 3000 to 8000. Statistically, the result was found to be highly significant. After seeing the present trend it can be concluded that respondents who are having low family income possess good leadership qualities.

Socioeconomic status (SES) remains less prevalent in higher education and leadership education research but can have a considerable impact on students' experiences and leadership capacity. The National Center for Education Statistics (NCES) recommends using family income, educational attainment, and occupational status of heads of households as a composite measure of SES (Cowan et al., 2012). Walpole (2003) followed these recommendations and used parental income, parental educational attainment, and occupational prestige to create an SES variable. After reviewing the available literature on effect of family income and socioeconomic status on leadership ability of individual it was found that research connecting students' socioeconomic status to their campus involvement and leadership capacity is even more limited (Lundberg et al., 2007; Walpole, 2003). Using the framework of social, cultural, and economic capital, Walpole (2003) found that students from low SES backgrounds were involved less in student organizations and gained less social and cultural capital than their peers. However, 52% of low SES students reported working 16+ hours per week and gained more economic capital than their high SES peers who were more involved in campus organizations than employment activities (Walpole, 2003).

The table further presents the data pertaining to father's and mother's education presents that all the respondents (100.0%) who had fathers educated upto MBA were found to have high leadership skills while majority of the respondents (45.5%) who had mothers educated upto B.A. were found to have better leadership skills. All the respondents (100.0%) whose fathers were educated upto ITI was found to have average level of leadership skill while majority of the respondents (66.5%) whose mothers were educated upto primary level was found to have average leadership skills. The difference was found to be statistically significant.

In case of type of family, majority of the respondents (35.5%) who were living in Joint family were found to have better leadership skills in comparison to those who are living in nuclear families (31.6%). Statistically, the difference was found to be significant at 0.05 level of significance.

The obtained data regarding fathers and mothers occupations depicts that the more than half of the respondents (54.8%) whose fathers were employed was found to have high leadership skills while the respondents whose mothers were running their own business were found to have high leadership skills. Majority of the fathers (73.6%) and mothers (83.3%) who were service class their wards had average level of leadership skills. Statistically, the results were found to be highly significant.

In nutshell, the table elaborates that location, class, age, type of family, religion, gender, income, fathers and mother education and occupation has significant association with leadership skills. Study conducted by Sürücü, et.al, (2018) also depicts that the members of the organization have a meaningful relationship with age, gender, marital status and experience perceptions of leadership and that there is no meaningful relationship between the level of education. Leadership development has been an important theme in the field of leadership research. Based on the positive youth development theory, adolescence is the best and critical time for leadership development when leadership skills are introduced, tested and cultivated over time (Li, Wang, 2012).

Chapter v

SUMMARY AND CONCLUSIONS

Adolescence is the most crucial phase for an individual. It is the transitional phase from childhood to adulthood marked by prominent physical, cognitive, emotional and social changes. The inherent buffers existing in the society in the form of control and support from the closed ones guide the adolescents to grow into a mature adult.

However, in the recent years, many changes have taken place in our traditional society due to industrialisation and globalisation. Impacts of these changes are evident in the entire society, with no exception to adolescents. The family ties have weakened; moral, social, religious and cultural controls rarely exist and a new life style emerged among the adolescents. The highly competitive world of today and the absence of traditional norms and support have heightened the stress among adolescents resulting in multiple mental health issues such as depression, anxiety, loneliness, rejection, diffidence, anger, confliction in interpersonal relationship and failure. Alcohol abuse and criminal behaviour among the adolescents too are not uncommon (Smith et al. 2004).

LSE is suggested by many researchers as a prevention and development approach to this serious scenario. As the definition by WHO (1997) suggests, internalizing the essential life skills helps the adolescents to deal with the concerns in the modern world in a dignified and mature way bringing success to them. These skills will help them to resist peer pressure as they learn how to accept themselves for who they are. These basic skills will help young people in coping with difficulties they face in their personal, emotional and social development. Life skills are

essentially those abilities that help promote mental well-being and competence in young people as they face the realities of life. With life skills one is able to explore alternatives, weigh pros and cons and make rational decisions in solving each problem or issue as it arises.

Understanding the importance of LSE present study was planned to access the need of life skill training for adolescence. For this purpose questionnaire on different aspects of life skill was developed and tested for reliability and validity. Developed questionnaire was administered on more than 4000 respondents both males and female studying in government schools of udham singh nagar to know their need on life skills.

The data was pooled and tabulated variable wise and according to the objectives of the study. Across the results, categorization was done separately for 4000 men and women according to the components of life skills. Data was analyzed by using descriptive statistics (percentages and frequencies) and chi^2 test. The major findings of the study are presented below under different heads for easy comprehension.

The major findings of the study are as follows:

5.1 Knowledge on nutrition and reproductive health

- Approximately half of the surveyed respondents had poor knowledge, 39 percent respondents had average knowledge and only 11 percent had good knowledge regarding nutrition and reproductive health.
- Among those respondents who had average to good level of knowledge regarding health and nutrition most of them were from class 10^{th}, 11th and 12^{th} and respondents of 14 years and above age group.
- It was found that as class, age and family income increases respondents level of knowledge on the particular aspect also increases.
- Females had good knowledge compared to their male counterparts on this particular topic.
- Respondents whose fathers and mothers were educated upto graduation and more than that most of their children had average to good level of knowledge regarding health and nutrition compared to the children of uneducated or less educated fathers.
- The respondents who lived in joint family showed good knowledge level in comparison to those who live in single/nuclear family.

- Locale, type of family, class of children, gender, age, family income, religion, parents education and occupation has significant association with the nutritional and reproductive health related knowledge.
- Urgent need to initiate community-level life skill education, sex education and behaviour change communication was observed.

5.2 Knowledge on personal, environmental and food related cleanliness

- It was found that approximately one third of studied respondents had poor knowledge regarding personal, environmental and food related cleanliness whereas others had good to average level of knowledge regarding the present topic.
- The respondents studying in higher classes (12^{th}, 11^{th}, 10^{th}) and whose ages were more than 14 years were found to have good knowledge about hygiene and sanitation compared to respondents studying in lower grades (7^{th}, 8^{th}, 9th).
- The females were found to be more aware about hygiene and sanitation in comparison to males.
- Respondents who had family income more than 8001 were found to be more aware about personal, environmental and food related cleanliness in comparison those with lower family income.
- Respondents of educated parents had good personal, environmental and food related cleanliness knowledge compared uneducated or less educated respondents.
- Respondents from nuclear family were found to have better knowledge in comparison to those who live in joint family.
- Respondents whose fathers and mothers were unemployed or worked as laborers were found to have poor knowledge regarding persona, environmental and food related cleanliness compared to respondents of educated parents.
- Locale, class, gender, age, family income, religion, father education, occupation and mother occupation has significant association with the personal hygiene knowledge level of an individual. However, mother education and type of family was found to have no association with hygiene and sanitation knowledge level.

5.3 Knowledge on girl's personal hygiene

- Majority of the studied adolescent girls had poor knowledge regarding maintaining menstrual hygiene and very less percentage of girls had good knowledge.
- Locale of the respondents does not bring any difference in the knowledge level of girls regarding personal hygiene.
- Girl's knowledge regarding personal hygiene was not found to be associated with income of the family and type of family.
- It was found that as age increases level of knowledge of respondents also increases. low percentage of respondents whose age was more than 14 years had good knowledge level whereas majority of the respondents whose age was less than 14 years of age had poor knowledge level.
- It is evident from the study that father's education had not much impact on maintaining personal hygiene among girls but mother's education had significant impact. Girls of educated mothers were more aware about maintaining personal hygiene compared to uneducated mothers.
- Girls whose parents are engaged in any occupation are more aware about maintaining personal menstrual hygiene and sanitation compared to unemployed parents.
- Age, religion, father and mother education has significant association with girls' personal hygiene and knowledge whereas locale, income, type of family and occupation of father and mother was found to have no significant association with knowledge of girls regarding personal hygiene.
- Among all the surveyed respondents most of them were aware about menstruation during their first menstruation.
- Father's education, type of family, parental occupation, age and income was found to have significant association with experience during first menstruation while on the other hand locale, religion, mother education, was not significantly associated with experience during first menstruation.
- More than 50 percent studied respondents receive menstruation related information from their mothers, followed by elder sisters and friends in school.

- Due to cheaply available sanitary pads most of respondents were found to maintain good menstrual hygiene and sanitation. Approximately 70 percent uses sanitary pads available in the market rest of them take other sanitary measures during menstruation.
- Majority of the respondents reported that they change sanitary pads after every four hours and they throw it in closed bins after wrapping it in news paper.

5.4 Knowledge on HIV AIDS

- Most of the surveyed respondents (approximately 76.57 %) had poor knowledge regarding HIV AIDS rest 23.42 % respondents had good knowledge.
- Respondents who were studying in higher classes like class 12^{th}, 11^{th} and 10^{th} were found to have better HIV knowledge compared to respondents from lower classes (7^{th}, 8th, and 9^{th}).
- Maximum percentage of females had better knowledge level in comparison to their counterparts.
- Maximum percentage of respondents whose age was more than 14 years were found to have better knowledge level in comparison to respondents who were younger than them i.e. less than 14 years of age.
- Higher the family income greater the knowledge of respondents regarding HIV AIDS were observed.
- Majority of the respondents whose fathers and mothers were educated upto graduation or more than that were found to have high level of knowledge regarding HIV AIDS compared to less educated parents.
- Majority of the respondents whose fathers were in service depicted high knowledge level followed by farmers and labour. The poor level of knowledge was showed by majority of those respondents whose fathers were unemployed.
- Half of the respondents whose mothers were in service depicted high knowledge level followed by housewife and labour.
- Location, class, age, religion, gender, income, fathers and mother education and occupation has significant association with HIV knowledge.

5.5 Knowledge and perception on drug use and misuse

- Majority of the respondents both male and female perceive that mostly people consume drugs during festivals followed by at parties, before the game, at home and before examination.
- As per the religion, majority of the respondents belonging to Punjabi families perceived that drug is consumed more at parties. But most of the Hindu and Muslim respondents perceive that it is consumed mostly at festivals.
- Mostly respondents perceive that majority of the people consume drugs by smoking, followed by mouth, by smelling and by injection.
- Approximately half of the surveyed respondents were aware about the available government de-addiction centers and approximately half of them were not aware.
- Majority of the females had knowledge about de-addiction center compared to males.
- Approximately half of the respondents said that telecommunication has effect on youth's ideology whereas half of the both males and females were agreed on this point.
- Majority of the respondents said that psychological problems such as anxiety, depression, loneliness, pessimistic thinking were the main cause of drugs consumption among population n followed by physical weakness, anger, lack of sleep or forgetfulness.
- Most of the surveyed respondents were aware about some commonly available drugs such as cigarettes, alcohol, and cannabis.
- Most of the adolescents think that mostly people consume drugs to get rid of physical disease, psychological problem, lack of self-confidence or due to no information about side effects of intoxications.

5.6 Knowledge and views on child marriage

- From all the surveyed respondents most of them revealed that child marriage is when both boys and girls are less than 18 years at the time of marriage. It means both of them were not aware about the correct age of marriage.
- Maximum percentage of respondents described that child marriage is not correct.
- More than half of the respondents think that correct age of marriage for girls is 19-25 years while on the other hand less than half of the respondents reported that the correct age of marriage for boys is 19-25 years followed by 26-30 years.

- Major negative consequence of child marriage is taking more responsibilities in early age was highlighted by most of the respondents.
- Less than half of the respondents revealed that child marriage is more permanent than normal marriage.
- Only one third of the respondents mentioned that they know someone who is happy with child marriage while rest of the samples denied.
- The foremost region for child marriage was traditions and customs followed by illiteracy.
- Majority of the respondents (more than 60%) pointed out that they have knowledge of laws against child marriage while left out samples had no knowledge.
- Mostly respondents whose fathers and mothers were educated were aware about the correct age of child marriage compared to those respondents whose fathers and mothers were not educated.
- Respondents of educated parents believe that child marriage is not correct than respondents of less educated parents.
- Mostly respondents of less educated parents thought that child marriage is more permanent than adult marriage.
- Mostly Respondents of educated parents were aware about the available laws against child marriage compared to respondents of less educated parents.

5.7 Knowledge on gender imbalances

- More than half of the studied respondents had gender stereotypical views and very few respondents had liberal view. The overall score depicts the conservative mindset of respondents.
- The data specific to class of respondents represents that majority of the respondents who were studying in class 10^{th} were found to have typical views regarding gender stereotyping followed by respondents studying in class 12^{th} and 11^{th}.
- Only a small percentage of respondents from all classes had liberal view on Gender stereotyping.
- Majority of the males were found to have typical views on gender stereotype in comparison to females.
- A very less females had liberal views.

- Respondents who had age less than 14 years had more moderate to liberal views in comparison to those respondents who had age more than 14 years.
- It can be concluded from the study that as age increases individual become more mature and their thinking changes according to the approved norms of society.
- Maximum percentage of Muslim respondents expressed typical views regarding gender stereotyping followed by Hindus and Punjabis.
- There were not much difference observed in the respondent's view living in joint and nuclear family.
- The difference was found to be highly significant statistically in case of gender, age, religion and type of family.
- More than half of the respondents had typical view on gender stereotype irrespective of income, education and occupation of parents.
- Location, class, age, type of family, religion, gender, income, fathers and mother education and occupation has significant association with gender stereotyping.

5.8 Knowledge on need and importance of career counselling

- Out of 4230 respondents, 2483 students were aware about career counselling.
- Majority of the respondents asserted that the correct age of career counselling is between 15 to 25 years.
- More than half of the respondents revealed that career counselling helps them to avail resources for achieving career goals.
- About 46.4% respondents choose their parents for receiving advice on future goals followed by teachers.
- Maximum percentage of respondents specified that career counselling provide them information on selected profession and perceived the importance of career counselling for all the government and private schools respectively.
- Maximum percentage of respondents whose age was more than 14 years had more awareness on career counselling in comparison to those respondents whose age was less than 14 years.
- Females had more awareness regarding career counselling in comparison to males.
- Respondents of educated parents had more awareness regarding career counseling compared to less educated parents.

5.9 Knowledge on importance of leadership skills

- From all the surveyed respondents more than 60 percent had average level of leadership skills and more than 30 percent possess good leadership skills. Very little percentage of respondents had poor leadership skills.
- Maximum percentage of respondents studying in higher classes such as 12^{th}, 11^{th} and 10^{th} were found to posses better leadership skills compared to respondents studying in lower classes such as 7^{th}, 8^{th} and 9^{th}.
- Present analysis proves that as age increases leadership quality in individual also increases.
- The data related to gender reflects that maximum percentage of males posses good level of leadership skills in comparison to their counterparts.
- Maximum percentage of respondents whose age was more than 14 years were posses better leadership skill in comparison to respondents who were younger than them i.e. less than 14 years of age.
- Majority of the respondents who belonged to Punjabi religion were found to have high leadership skills followed by respondents from Hindu and Muslim religion.
- Respondents whose fathers and mothers were educated were found to possess good leadership skills compared to those respondents whose fathers and mothers were less or uneducated.
- Respondents from joint family posses' good leadership skills than respondents from nuclear family.
- More than half of the respondents whose fathers were employed had high leadership skills.
- Location, class, age, type of family, religion, gender, income, fathers and mother education and occupation has significant association with leadership skills.

After reviewing available literature on life skill education and analyzing the findings of the present study it can be concluded that children and adolescents can be trained to strengthen their life skills. If life skill activities are accompanied by suitable classroom activities by teachers, the children and adolescents would acquire skills required for happy and healthy life. Mental health professionals, life skill trainers, counselors, NGOs can work directly or through teachers or parents should be involved in skill building exercises and promoting competence among adolescents.

Adinew, Y.M., Worku, A.G. and Mengesha, Z.B. 2013. Knowledge of reproductive and sexual rights among University students in Ethiopia: institution-based cross-sectional study. *BMC International Health and Human Rights*. 13(12) Published online 2013 Feb 13. doi: 10.1186/1472-698X-13-12.

Angstadt, M., Sauder, C.L., Hajcak, G. and Phan, K.L. 2013. Test-retest reliability of amygdala response to emotional faces. *Psychophysiology*, 50(11): 1147-1156. doi: 10.1111/psyp.12129. (Retrieved on 11 June 2017).

Ansari-Lari, M., Soodbakhsh, S. and Lakzadeh, L. 2010. Knowledge, attitudes and practices of workers on food hygienic practices in meat processing plants in Fars, Iran. *Food control.* 21(3):260–3. https://doi.org/10.1016/j.foodcont.2009.06.003.

Aparna, N. and Raakhee, A.S. 2011. Life Skill Education for Adolescents: Its Relevance and Importance, GESJ: Education Science and Psychology. No. m2 (19), ISSN-1512-18013. UGC Research Scholar, Department of Education, University of Kerala.

Asmitaben, Chandrakantbhai Patel 2012. Life Skill and Academic Anxiety of Student-Teacher. *Indian Streams Research Journal, International Recognized Multidisciplinary Research Journal*. 2(10): 2230-7850.

Atkin, C.K. 1995. Survey and experimental research on effects of alcohol advertising. In: Martin S, editor. Mass Media and the Use and Abuse of Alcohol. *Rockville, MD: National Institute on Alcohol Abuse and Alcoholism,* pp.39-68.

Avarand, A. and Abedi-Sarvestani, A. 2015. Analysis of knowledge and attitude towards food safety among university students in Gorgan city. *Journal of Food Hygiene.* 17(5):53–66.

Baishakhi Paria, Agnihotri Bhattacharyya, and Sukes Das 2019. An assessment of knowledge and practices relating to the usage of sanitary pads. *J Family Med Prim Care*, 3(4): 413–417.

Bandura, A. 1977a. Self-efficacy: Toward a unifying theory of behaviour change. *Psychological Review*, 84(1): 191-215

Bandura, A. 1977b. Social learning theory. Englewood Cliffs, NJ: Prentice Hall

Best, J. and Kahn, J.V. 1992. Research in Education (4th ed.) New Delhi: Prentice Hall of India Pvt Ltd. pp-10-12.

Bharath, Srikala and KV Kishore Kumar 2010. Empowering Adolescents with Life Skills Education in Schools –School Mental Health Program: Does it work? *Indian Journal of Psychaitry*. 52(4): 344-349.

Bindhu, David and Shiny, John 2011. Life Skills and Attitude towards Vocation among the Vocational Higher Secondary and Higher Secondary School Students, *EduTracks*, 10(8): 1618.

Bobhate, P. and Shrivastava, S. 2011. A cross sectional study of knowledge and practices about reproductive health among female adolescents in an urban slum of Mumbai. *Journal of Family and Reproductive Health*. 5(4):117-24.

Boniface Francis Kalanda 2010. Life Skills and Reproductive Health Education Changes Behaviour in Students and Teachers: (Evidence from Malawi). Educational Research and Reviews. 5(4): 169174. ISSN 1990-3839 © 2010 Academic Journals. www.academicjournals.org

Boote, D.N. and Beile, P. 2005. Scholars before Researchers: On the Centrality of the Dissertation Literature Review in Research Preparation. *Educational Researcher*. 34(6): 3-15.

Botvin, G.J. and Griffin, K.W. 2004. Life skills training: Empirical findings and future directions. *Journal of Primary Prevention*, 71(5): 405–414. doi:10.1023/B:JOPP.0000042391.58573.5b

Botvin, G.J., Dusenbury, L., Baker, E., James-Ortiz, S. and Kerner, J. 1990. A skills training approach to smoking prevention among hispanic youth. American Journal of Health Promotion, 5(1), 70–71. doi:10.1007/BF00844872

Botvin, G.J., Griffin, K.W., Diaz, T. and Ifill-Williams, M. 2001. Drug abuse prevention among minority adolescents: Posttest and one-year follow-up of a school-based preventive intervention. *Prevention Science*, 2(1): 1–13. doi:10.1023/a:1010025311161

Bouck, E.C. 2010. Reports of Life Skills Training for Students with Intellectual Disabilities in and out of School. *Journal of Intellectual Disability Research*, 54(12):1093-103.

Breslau, N., Schultz, L.R., Johnson, E.O., Peterson, E.L. and Davis, G.C. 2005. Smoking and the risk of suicidal behavior: A prospective study of a community sample. *Arch Gen Psychiatry,* 62: 328-34.

Bwayo, J.K.W. 2014. Primary school pupils' life skills development: The case for primary school pupils development in Uganda. Limerick: Mary Immaculate College.

Campbell-Heider, N., Tuttle, J. and Knapp, T.R. 2009. The effect of positive adolescent life skills training on long term outcomes for high-risk teens. *Journal of Addictions Nursing*, 20(1): 6–15. doi:10.1080/10884600802693165

Canadian Center of Science and Education 2015. *Glob J Health Sci.* 7(1): 16–23.

Child Protection and Child Rights, 2008. Vulnerable Children Affected by Substance Abuse. Childline 1098. Available from: http://www.childlineindia.org.in/ children-affected-by-substance-abuse.htm.

Cina, A., Röösli, M., Schmid, H., Lattmann, U.P., Fäh, B., Schönenberger, M. and Bodenmann, G. 2011. Enhancing positive development of children: Effects of a multilevel randomized controlled intervention on parenting and child problem behavior. *Family Science*, 2(1): 43–57. doi:10.1080/19424620.2011.601903

Cowan, C.D., Hauser, R.M., Kominski, R.A., Levin, H.M., Lucas, S.R., Morgan, S. L. and Chapman, C. 2012. Improving the measurement of socioeconomic status for the national assessment of educational progress: A theoretical foundation. National Center for Education Statistics, (November), 1–37. Retrieved from http://nces.ed.gov/nationsreportcard/pdf/researchcenter/ Socioeconomic_Factors.pdf

Cress, C.M., Astin, H.S., Zimmerman-Oster, K. and Burkhardt, J.C. 2001. Developmental outcomes of college students' involvement in leadership activities. Journal of College Student Development, 42(1): 15–27.

Crişana. L., Paveleab, A. and Ghimbuluţ, O. 2015. Education Facing Contemporary World. doi: 10.1016/j.sbspro.2015.02.196 Science Direct The 6th International Conference Edu World 2014 (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Csikszentmihalyi, M. and Schneider, B. 2000. Becoming adult: How teenagers prepare for the world ofwork. New York. Basic books.

Dasgupta, A. and Sarkar, M. 2008. Menstrual hygiene: How hygienic is the adolescent girl? *Indian J Community Med.,* 33:77–80.

Datta, S.S. and Majumder, N. 2012. Sex Education in the School and College Curricula: Need of the our. *Journal of Clinical and Diagnostic Research*, 6(7): 1362-1364, ID: JCDR/2012/4104:242.

Deffenbacher, J., Lynch, R., Oettin, E. and Kemper, C. 2008. Anger reduction in early Adolescents. *Journal of Counselling Psychology*, 41(2): 149-157.

Desai, M. 2010. A rights-based preventive approach for psychosocial well-being in childhood. Mumbai: Spinger.

Dongre, A.R., Deshmukh, P.R. and Garg, B.S. 2007. The impact of school health education programme on personal hygiene and related morbidities in tribal school children of Wardha District. *Indian J Community Med* 2006;31:81-2.

Doug Couch 2009. The Law of Attraction: Why Are People Still Failing? The Art of Inspiration. May 08 2009. Living Above the Line: A Life Skill that Creates Personal Power. Retrieved from http//:creationthoughts.com.

Dubat, K. Punia, S. and Goyal, R. (2007). A Study of Life Stress and Coping Styles among Adolescents Girls. *Journal of Social Science*. 14 (2): 191-194.

Dudeja, P., Sindhu, A., Shankar, P. and Gadekar, T. 2016. A cross-sectional study to assess awareness about menstruation in adolescent girls of an urban slum in western Maharashtra. *International J Adolescent Medicine Health.*

Dugan, J.P., Komives, S.R. and Segar, T.C. 2008. College student capacity for socially responsible leadership: Understanding norms and influences of race, gender, and sexual orientation. NASPA Journal, 45(4): 475–500. doi:10.2202/1949-6605.2008

Eccles, J. 1999. The development of children between ages 6 to 14. *The future of children*, 9(2): 30-44.

Eisen, M., Zellman, G.L. and Murray, D.M. 2003. Evaluating the "lions-quest" "skills for adolescence" drug education program. Second-year behavior outcomes. *Addictive Behaviors*, 28(5): 883–97.

Elmadani,M., Elamin, E., Tamomh, G.A. and Twum, P. 2020. Assessment of the Personal Hygiene Practices among Primary Schools Children, Sudan: A Cross-Sectional School-Based Study. Research Article Volume 5 Issue 1Received Date: December 02, 2020Published Date: January 06, 202

Epstein, J.A., Griffin, K.W. and Botvin, G.J. 2000. Role of general and specific competence skills in protecting inner-city adolescents from alcohol use. *Journal of Studies on Alcohol*, 61(3): 379–386.

Evans, R.I. 1976. Smoking in children: Developing a social psychological strategy of deterrence. *Preventive Medicine*, 5(3): 219-221.

Evans, R.I. 1998. A historical perspective on effective prevention. In Bukoski,W., and Evans, R. (Eds). Cost Benefit/Cost Effectiveness Research in Drug Abuse Prevention : Implications for Programming and Policy, Rockville, MD. National Institute of Drug Abuse.

Felisa Deskeo 2002. The Importance of Adding Life Skills to Standard Curricula. Retrieved from http//:www.lifeskill.com.

Gaash Basir, Ahmad Muzaffar, Kasur Rehana and Bashir Shabnam 2003. Knowledge, Attitude and Belief on HIV/ AIDS among the Female Senior Secondary Students in Srinagar District of Kashmir. *Health and Population – Perspectives.* 26 (3): 101 – 109.

Galagali, P.M. 2011. Adolescence and life skills. In R. Olyai & D. K. Dutta (Eds.), Recent advances in adolescent health (pp. 209–218). New Delhi: JAYPEE Brothers Medical Publishers (P) LTD.

Gardner, H. 1993. Frames ofMind: The theory ofmultiple intelligences. New York: Basic Books.

Gayatri, Channaveer, R.M. and Lakshmana, G. 2017. Life skills education program among high school children: An intervention study. *Journal of Mental Health Education, NIMHANS*, 1: 1-7.

Geeta, G. 2011. Academic Anxiety and Life Skills of Secondary School Children. *Journal of Community Guidance & Research,* 28(3): 465-475.

Giannotta, F. and Weichold, K. 2016. Evaluation of a life skills program to prevent adolescent alcohol use in two european countries: One-year follow-up. *Child & Youth Care Forum*, 45(4): 607–624.

Givaudan, M., Leenen, I., Van De Vijver, F.J.R., Poortinga, Y.H. and Pick, S. 2008. Longitudinal study of a school based HIV/AIDS early prevention program for Mexican Adolescents. *Psychology, Health & Medicine*, 13(1): 98–110. doi:10.1080/13548500701295256

Goddings, A.L., Mills, K.L., Clasen, L.S., Giedd, J.N., Viner, R.M. and Blakemore, S.J. 2014. The influence of puberty on subcortical brain development. *Neuroimage*, 88: 242-51.

Goleman, D. 1997. Emotional intelligence: Why it can matter more than IQ. New York: Bantam Books.

Goody, J. 2001. Competencies and Education: Contextual Diversity, in Rychen, D.S, Salganik L.H. (EDS), Defining and Selecting Key Competencies, Horefe and Huber Publications, Gottingen.

Goswami, H. 2015. Substance abuse among youths at Guwahati city Assam: Major instigator and socio-demographic factors. *Int Educ Res J,* 1:39-42.

Griffin, K.W. and Botvin, G.J. 2014. Alcohol misuse prevention in adolescents. *Encyclopedia of Primary Prevention and Health Promotion*. doi:10.1007/978-1-4614-5999-6

Griffin, K.W., Botvin, G.J., Scheier, L.M., Epstein, J.A. and Doyle, M.M. 2002. Personal competence skills, distress, and wellbeing as determinants of substance use in a predominantly minority urban adolescent sample. *Prevention Science*, 3(1): 23–33. doi:10.1023/A:1014667209130

Gultie, T., Hailu, D. and Workineh, Y. 2014. Age of menarche and knowledge about menstrual hygiene management among adolescent school girls in Amhara province, Ethiopia: Implication to health care workers & school teachers. *PLoS One,* 9:e108644.

Guo Y., Connor, Carol McDonald, Yang, Y. and Roehrig, A. 2012. The Impact of Teacher Self Efficacy on student Achievement. Retrieved from http://www.schoolleadership20.com/forum/topics/theimpact-ofteacherselfefficacy onstudentachievement?xg_source=activity

Hamilton, D.L. and Sherman, J.W. 1994 'Stereotypes', in Wyer, R.S. and Srull, T.K.J. (Eds.): *Handbook of Social Cognition* Erlbaum, Hillsdale, NJ. 2: 1–68.

Hansen, W., Nangle, D. and Kathryn, M. 1998. Enhancing the effectiveness of social skills interventions with adolescents. *Education and Treatment of Children*, 21(4): 489-513.

Hawkins, J., Catalano, R. and Miller, J. 1992. Risk and Protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin*, 112(1): 64-105.

HIV/AIDS Epidemic in India. Available from: http://www.aidsfree-india.org/youth-adolescence/hiv-aids-youth-adolescents-intro.htm .

Hojati, H., Alvestany, S., Akhundzade, G., Heydari, B. and Sharif Nia S.H. 2010. Study on Mental health and its relationship to quality of life in addicts. Journal of Shaheed

Sadoughi University of Medical Sciences [in persian]. High Risk Behavior Conference, 18(3): 207-14.

Home Current issue instructions submit article 2018. *J Family Med Prim Care.* 7(6): 1439–1445. doi: 10.4103/jfmpc.jfmpc_80_18

Hossein, J. 2015. The Effect of Life Skills Training on the Mental Health and Level of Resilience among Teachers of Normal Students and Teachers of Exceptional Students in Zahedan. Vol.4 No.2. April 2015. Department of Education, University of Sistan and Baluchestan, Zahedan, Iran.

Jain, P. and Katni, S. 2017. Social impact of career guidance and counseling on student's career development. *International Journal of Research,* Vol.5 (Iss.6): June, 2017] ISSN- 2350-0530(O), ISSN- 2394-3629. DOI:https://doi.org/10.29121/granthaalayah.v5.i6.2017.1993

Jain, R. and Anand, P. 2016. Awareness of pubertal changes and reproductive health in adolescent girls: a comparative study. *International Journal of Community. Med Public Health*, 3(12): 3313-9.

Jayachithra, J. 2020. Awareness on Life Skills among Prospective Teachers, *Journal of emerging Technologies and innovative research (JETIR)*, www.jetir.org. 7(2): 1229-1231, ISSN - 2349-5162.

Jena Hilliard, 2019. The Influence of Social Media on Teen Drug Use, National Center on Addiction and Substance Abuse at Columbia University, https://www.addictioncenter.com/community/social-media-teen-drug-use/

Jessy John Sir, 2009. Impact of Life Skills Development Programme on the Behavioural Aspects of Children in need for care and protection. SSRN *Loyala Journal of Social Sciences*. 23(2): July- Dec 2009.

Jewitt, S. and Ryley, H. 2014. It's a girl thing: Menstruation, school attendance, spatial mobility and wider gender inequalities in Kenya. *Geoforum* 56:137-47.

Jianu, C. and Chiş, C. 2012. Study on the hygiene knowledge of food handlers working in small and medium-sized companies in western Romania. *Food Control*. 2012;26(1):151–6. https://doi.org/10.1016/j.foodcont.2012.01.023.

Joffer, J., Burell, G., Bergström, E., Stenlund, H., Sjörs, L. and Jerdén, L. 2014. Predictors of smoking among Swedish adolescents. *BMC Public Health*. 14:1296.

Jones, B. and Iredale, N. 2006. Developing and Entrepreneurial Summer School, Innovations in Education and Teaching. *International Journal of Social Science & Interdisciplinary Research*. 1(11): 43-45, ISSN 2277 3630.

Jones, M.I. and Lavallee, D. 2009. Exploring the life skills needs of British adolescent athletes. *Psychology of Sport and Exercise*, 10(1): 159–167.

Jose, M.J., Farah, F.F., Joseph, S.T. and Fernandez, A.C. 2019. Knowledge regarding reproductive health among women of reproductive age group in three sub-centre areas of a primary health center, Sarjapur, Bengaluru, Karnataka: a cross sectional study. *International Journal of Community Medicine and Public Health*, 6(9): 4082.

Joshi, R.K., Sanjay M. M., 2019. https://doi.org/10.1371/journal.pone.0216321

Jothy, K. and Kalaiselvi, S. 2012. Is menstrual hygiene and management an issue for the rural adolescent schoolgirls? *Elixir Social Science,* 44:7223–28.

Kezar, A. and Moriarty, D. 2000. Expanding our Understanding of Student Leadership Development: A Study Exploring Gender and Ethnic Identity. Journal of College Student Development, 41(1): 55–69.

Khera, S. and Khosla, S. 2012. A Study of Core Life Skills of Adolescents in Relation to their Self Concept developed through Yuva schools Life Skill Programme. *IRJC International Journal of Social Science & Interdisciplinary Research*, 1(11):115, ISSN 2277 3630. Jamia Millia Islamia, New Delhi.

Kimbui, S.K. 2011. Implementation of Life Skills Education Curriculum in Public Primary Schools in Ruiru District: Kenya. Department of Educational Management, Policy and Curriculum Studies. pp-92. The HQ 2039, 2011, URI: ir-library.ku.ac.

Kohlberg, L. 1976. Stages in the development of moral thought and action. New York. Holt.

Konkel, K.E. 2016. Is a life skills training infusion an effective strategy to reduce substance use aming at-risk teens in a mentoring program?. Fort Collins, CO: Colorado State University.

Kord, N. and Hassan, P.S. 2008. Preparation and compilation of a life-skills curriculum for students in the high school period, (Author(s): Kord, N.R., Sharifi, H.P). *Journal of Educational Innovations Spring,* 24: 47-56.

Lal, B.S. 2010. The Economic Impact Of HIV/AIDS: A Study in Tribal Areas in Andhra Pradesh, Indian Journal of Millennium Development Studies: An International Journal, 5(1-2):139-146, ISSN: 0973-3981.

Lal, B.S. 2015. Procedia - Social and Behavioral Sciences 180. 1022 – 1029, Child Marriage in India: Factors and Problems. *International Journal of Science and Research* (IJSR) 438(4):2993-2998, Authors: Kakatiya University.

Langford, B.H., Badeau, S.H. and Legters, L. 2015. Investing to improve the well-being of vulnerable youth and young adults: Recommendations for policy and practice. Retrieved from http://www.ytfg.org/2015/12/wellbeing/.

Lundberg, C.A., Schreiner, L.A., Hovaguimian, K.D. and Miller, S.S. 2007. First-generation status and student race/ethnicity as distinct predictors of student involvement and learning. NASPA Journal, 44(1): 57–83.

MacKillop, J., Ryabchenko, K.A. and Lisman, S.A. 2006. Life skills training outcomes and potential mechanisms in a community implementation: A preliminary investigation. Substance Use & Misuse, 41(14): 1921–1935. doi:10.1080/10826080601025862

Mahanta, B., Mohapatra, P.K., Phukan, N. and Mahanta, J. 2016. Alcohol use among school-going adolescent boys and girls in an industrial town of Assam, India. *Indian J Psychiatry*; 58:157-63.

Mahesh, O. 2003. Identification of Life Skills Essentials for Students, Ajmer: M.D.S. University, M.Ed Dissertation. pp-16-20.

Malakolunthu, S., Idris, A.R. and Rengasamy, N.C. 2010. Teacher Professional Experience and Performance: Impact of the Work Environment and General Welfare in Malaysian Secondary Schools. Retrieved from www.eric.ed.gov

Malayankandy Usha Ajithkumar 2009. Life Skill : A Basic Learning Need for All Young People. *Edutracks.* 8(9): 18-20.

Mangrulkar, L., Whitman, C.V. and Posner, M. 2001. Life skills approach to child and adolescent healthy human development. Pan American Health Organisation.

Manila: Department of Health; 1996. Department of Health, Republic of the Philippines. Knowledge, attitudes, and practices of school children on environmental health and sanitation. Environmental Health Service in collabo-ration with Department of Education, Culture and Sports and assistance from UNICEF. Retrieved March 29, 2009 from http://library.doh.gov.ph/

Manjula R., Kashinakunti S.V., Geethalakshmi, R.G., Sangam, D.K. 2012. An educational intervention study on adolescent reproductive health among pre-university girls in Davangere district, South India. *Ann Trop Med Public Health.* 5(3):185-9.

Manjula, P.S. 2012. Life Skills Training for Holistic Development. Sunday. 15 July 2012. IST, Agency: DNA.

Margret, F. 2007. Life Skills Education in "Changing Minds". Retrieved from http//: org/articles/article/life-skills-education.htm

Martin, K., Nelson, J. and Lynch, S. 2013. Effectiveness of school- based life-skills and alcohol education programmes: A review of the literature.

McGee, R., Williams, S., Nada-Raja, S. and Olsson, C.A. 2013.Tobacco smoking in adolescence predicts maladaptive coping styles in adulthood. *Nicotine Tob Res*. 15:1971–7.

McGuire, W.J. 1964. Inducing resistance persuasion: Some contemporary approaches. In Berkowitz, L. (Ed). Advances in Experimental Social Psychology. New York: Academic Press.

McGuire, W.J. 1968. The nature of attitudes and attitude change. In Lindzey, G., and Aronson, E. (Eds). Handbook of social psychology. Reading: Addison Wesley

McWhirter, J.J., McWhirter, B.T., McWhirter, E.H. and McWhirter, R.J. 2007. At risk youth: A Comprehensive response for counsellors, teachers, psychologists, and human service professionals (4th ed.). Belmont, CA: Thomson Brooks/Cole.

Menrath, I., Mueller-Godeffroy, E., Pruessmann, C., Ravens-Sieberer, U., Ottova, V., Pruessmann, M. and Thyen, U. 2012. Evaluation of school-based life skills programmes in a high-risk sample: A controlled longitudinal multi-centre study. *Journal of Public Health*, 20(2): 159–170. doi:10.1007/s10389-011-0468-5

Merikangas, K.R. and McClair, V.L. 2012. Epidemiology of substance use disorders. *Hum Genet*. 131:779–89.

Naik, M. 2006. HIV/AIDS awareness for youth through theatre and puppets-AIDS. XVI International AIDS Conference. Abstract no.2194623, Issues: WEPE0814. Retrieved from https://www.aids2014.org/Abstracts/A2194623.

Nair R.V. 2010. Life Skills Personality and Leadership. Department of life skills Education, Rajiv Gandhi National Institute of Youth Development, Sriperumbudur.

Naswa S, Marfatia YS. Adolescent HIV/AIDS: Issues and challenges. Indian J Sex Transm Dis. 2010;31:1–10. [PMC free article] [PubMed] [Google Scholar]

Navidinia, H., Mousavi, I. and Shirazizade 2009. The Relationship Between Iranian English Language Teachers' Efficacy Beliefs and Their Students Achievement. Retrieved from http://www.mjal.org/Journal/relationships.pdf

Ndemba 2014. Factors Affecting Implementation of Life Skills Curriculum in Public Primary Schools in Nzambani District: Kenya. Education Administration and Planning Journals, The Fountain, Journal of Education Research. Retrieved from http//:www.eap.uonbi.ac.ke/node/1317

Newman, B. and Newman, R. 1988. Development through life: A psychosocial approach. New york: Wadsworth publishing.

Othman, S.M. 2018. Knowledge About HIV/AIDS Among High School Students in Erbil City/Iraq. IOSR Journal of Business and Management (IOSR-JBM), 20(2): 88-96.

Oyibo, P.G. 2012. Basic personal hygiene: Knowledge and practices among school children aged 6-14 years in Abraka, Delta State, Nigeria. *Continental J Tropical Medicine,* 6:5-11.

Pandya, Y.P. and Bhanderi, D.J. 2015. An Epidemiological Study of Child Marriages in a Rural Community of Gujarat. *Indian J Community Med.* 40(4): 246–251. doi: 10.4103/0970-0218.164392.

Patavegar, B.N., Kapilashrami, M.C., Rasheed, N. and Pathak, R. 2014. Menstrual hygiene among adolescent school girls: An in-depth cross-sectional study in an urban community. *Int J Health Sci Res,* 4:15-21.

Patle, R. and Kubde, S. 2014. Comparative study on menstrual hygiene in rural and urban adolescent girls. *Int J Med Sci Public Health,* 3:129–32.

Piaget, J. 1972. The principles of genetic epistemology. London: Routledge and Kegan Paul.

Pierce, J.P., Choi, W.S., Gilpin, E.A., Farkas, A.J. and Berry, C.C. 1998. Tobacco industry promotion of cigarettes and adolescent smoking. *JAMA*, 279: 511-5.

Pooja, Y. and Naved, I. 2009. Impact of Life Skill Training on Self-esteem, Adjustment and Empathy among Adolescents. *Journal of the Indian Academy of Applied Psychology*. 35: 61-70. Jamia Millia Islamia, New Delhi.

Pourallahvirdi, M., Rahmani, F., Ranjbar, F., Ebrahimi, B.H. and Ettehadi, A. 2016. Major Causes of Drug Abuse From the Viewpoint of Addicted Persons Referred to Addiction Treatment Centers of Tabriz City, Iran, Arch Neurosci, 3(3):e37653. doi: 10.5812/archneurosci.37653

Prajapati, R., Sharma, B. and Sharma, D. 2017. Significance of life skills education. *Contemporary Issues in Education Research*, 10(1): 1–6.

Prashant Thote (2015). An Analysis of Attitude of Secondary School Teachers towards In-service Training Programme of Life Skill Education in Central India: Indian Stream

Research Journal, International Recognized Multidisciplinary Research Journal, Volume: IV, Issue: VI, July-2014, ISSN No: 2230-7850.

Pujjar, L.L. 2014. Impact of Intervention on Life Skill Development among Adolescent Girls. *Karnataka Journal of Agricultural Science*, 27(1): 93-94.

Punia, B.K. 2005. Emerging Gender Diversity and Male Stereotypes: The Changing Indian Business Scenario. *Indian Journal of Industrial Relations*, 41(2): 188-205. https://www.jstor.org/stable/27768007

Putu, E.P., Arief W. and Mahmudah 2019. The Effects of Socio-demographic Characteristics on Indonesian Women's Knowledge of HIV/AIDS: A Cross-sectional Study. *J Prev Med Public Health*. 52(2): 109–114.

Pyhalto, K., Pietarinen, J. and Salmela-Aro, K. 2011. Teacher-Working- Environemnt Fit as a Framework for Burnout Experienced by Finnish Teachers. Retrieved from www.eric.ed.gov.

Quane, A. 2002. Key competence in lifelong Learning", Institutionalising Lifelong learning: Crating Conducive Environments for Adult Learning in the Asian Context, UNESCO Institute for Education, Hamburg.

Rao, C. 2011. Depression in adolescents with chronic medical illness. International Journal of Adolescent Medicine and Health. 23(3).

Rao, S., Aslam, S.K., Zaheer, S., Shafique, K. 2014. Anti-smoking initiatives and current smoking among 19,643 adolescents in South Asia: Findings from the Global Youth Tobacco Survey. *Harm Reduct J*. 11:8.

Ratnaprabha, G.K., Aswin, Kumar, Ashok, Kumar 2018. *International Journal of Medical Science and Public Health,* 7(6): 457-461.

Rawat, I.B. 2014. Effect of life skills training on teachers' perceived work environment and self efficacy: an experimental study, research scholer, university of Lucknow, Lucknow, India, 12p.

Redmond, E.C. 2003. Griffith CJ. Consumer food handling in the home:A review of food safety studies. *Journal of Food Protection.* 66(1):130–161. https://doi.org/10.4315/0362-028X-66.1.130.

Rob, L. 2011. Impact of Life Skills Training (LST) in Allegany County Schools: Prevalence of Substance Use Longitudinal Analysis. Evalumetrics Research, 58 Scotland Road Canandaigua, New York. 14424 585-394- 5811. A-1 2011. Retrieved from http//:www.evalumetrics.org.

Rosch, D.M., Stephens, C.M. and Collins, J.D. 2016. Lessons that last: LeaderShape-related gains in student leadership capacity over time. Journal of Leadership Education, 15(1): 44–59. doi:1012806/V15/I1/R4

Sanlier, N. 2009. The knowledge and practice of food safety by young and adult consumers. *Food control.* 20(6):538–42. https://doi.org/10.1016/ j.foodcont. 2008.08.006.

Saravanan, R. Lilly and Minnelkodi, B. 2012. Perception about HIV/AIDS A Survey among Teachers. *Edutrack*. 11(5): 41-43.

Sarkar, M. 2013. Personal hygiene among primary school children living in a slum of Kolkata, India, *Journal of Preventive Medicine and Hygiene* 54(3):153-8.

Satya, M. and Donald, P. 2012. "Need for 21st Century Curriculum". *Edutracks*, 11(9): 41-47.

Savoji, A.P. and Ganji, K. 2013. Increasing mental health of university students through life skills training (LST). *Procedia - Social and Behavioral Sciences*, 84, 1255–1259. doi:10.1016/j.sbspro.2013.06.739

Sclater, M. and Lally, V. 2013. Virtual Voices: Exploring Creative Practices to Support Life Skills Development among Young People Working in a Virtual World Community. *International Journal of Art & Design Education*, 32(3): 331-344. doi:10.1111/j.14768070.2013.12024.x.

Seth 2002. Planning Life Skills Education for Adolescents in Corporating, Relationship Health and Gender: New Delhi. U.N.F.P.A. Retrieved from http//:www.unpa.org.

Sharanya, T. 2014. Reproductive health status and life skills of adolescent girls dwelling in slums in Chennai. *Natl Med J India*, 27(6): 305-10., PMID: **26133325**

Sharifirad, G.H. and Hidarnia, A. 2001. Effect of health education in the decrease of intestinal parasitic infection in Ilam using Perry model. *Journal of Shaeed Sdoughi University of Medical Sciences Yazd.* 9(4):75–80.

Sharma S. 2003. Measuring life skills of adolescents in a secondary school of Kathmandu: an experience. In Kathmandu University. *Medical Journal*. 1(3): 170-176

Sharma, K.D., Gupta, S., Behl, S. and Mishra, A.P. 2014. A study and result of Indian distress and unfullfillment of human psychological applications. *IOSR Journal of Pharmacy,* 4(6): 28-31, (e)-ISSN: 2250-3013, (p)-ISSN: 2319-4219 www.iosrphr.org

Sharma, M. and Chaudhary, M. 2016. A study of drugs and substance abuse among adolescents of slum dwellers. *Int J Indian Psychol.,* 3:58. Available from: http://www.ijip.in.

Sharma, S. 2015. Do Leadership Qualities Determine Competent Principals. *Innovare Journal of Education.* 3(1): 1-6 , ISSN: 2347-5528.

Shechtman, Z., Levy, M. and Leichtentritt, J. 2001. The Life Skills Training Program (LST): Outcomes and Processes in Teacher Training. *In Journal of Educational Research*, 98(3): 144-154.

Shiela, R. 2010. Life Skills Education in Our Schools. In Teacher Plus- a Magazine for the Contemporary Teacher: Teacher Plus Magzine. (9 Feb, 2010). Retrieved from http//:www.teacherplus.org.

Shonkoff, J.P. and Phillips, D.A. 2000. From Neurons to Neighbourhoods‟: The Science of Early Childhood Development. Committee on Integrating the Science of Early Childhood Development, National Academies Press, Washington, D.C.

Shure and Spivack 1980. Interpersonal problem solving as a mediator of behavioural adjustment in pre school and kindergarten children. *Journal of Applied Developmental Psychology*, 3(1): 29-44.

Sinha, D.N., Reddy, K.S., Rahman, K., Warren, C.W., Jones, N.R. and Asma, S. 2006. Linking Global Youth Tobacco Survey (GYTS) data to the WHO framework convention on tobacco control: The case for India. *Indian J Public Health*. 50:76–89.

Sirohi, V. and Singh, A.K. 2012. Innovative Secondary Education for Skills Enhancement (ISESE) Skills Defined by Curricula: South and Southeast Asia. (August 1, 2012), Department of Foundations of Education, New Delhi, India.

Smith, E.A., Swisher, J.D., Vicary, J.R., Bechtel, L.J., Minner, D., Henry, K.L. and Palmer, R. 2004. Evaluation of life skills training and infused-life skills training in a rural setting: Outcomes at two years. *Journal of Alcohol and Drug Education*, 48(1): 51–70.

Subitha G. 2011. Is the current educational system imparting life skills education? Retrieved from http//:indian education review.com

Sudhir T. 2012. Teachers Taught to Sensitively Handle Teens' Problems, The Times of India, Jaipur. Sep 20, 2012.

Sunil, T.J. 2009. Incorporation of Life Skills Education for Adolescents in the School Curriculum – Rajasthan Experience. Apr 16, 2009. Retrieved from http//: sexual health visual.com.

Sürücü, L., Yeşilada, T. and Maşlakç, A. The Relationship Between Socio-Demographic Properties and Leadership Perceptions of Employees, European University of Lefke, Lefke TRNC Mersin 10 Turkey.

Talwar, P. 2007. Development of a training programme on adolescence education for secondary school teachers and students and studies its effectiveness. An unpublished Ph. D. Thesis. Vadodara: CASE, The Maharaja Sayajirao University of Baroda.

Tarun, D.K. 2011. A Study of Impact of Life Skills Intervention Training On Emotional Intelligence of College Adolescents. *Indian Journal of Psychological Science*, 2(2): 112-125.

Thakor, H.G. and Kumar, P. (2000). Impact Assessment of School-Based Sex Education Program Amongst Adolescents. *Indian Journal of Paediatrics*. 67(8): 551-558.

Thakre, S.B., Thakre, S.S., Reddy, M., Rathi, N., Pathak, K. and Ughade, S. 2011. Menstrual hygiene: Knowledge and practice among adolescent school girls of Saoner, Nagpur district. *J Clin Diagn Res.* 5:1027–33.

Theresa, M., Ferrari, C. and Houge, A. 2010. Parents' Perceptions of Life Skills Development in the 4-H Cloverbud Program. June 2004. Volume 42, Number 3. Research in Brief, 3RIB6, Journal of Extension.

Tikoo, V.K., Dhawan, A., Pattanayak, R.D. and Chopra, A. 2013. Assessment of Pattern and Profile of Substance Use among Children in India. National Commission for Protection of Child Rights (NCPCR) by National Drug Dependence Treatment Centre [NDDTC], All India Institute of Medical Sciences [AIIMS], New Delhi; 2013.

Tillapaugh, D. and Haber-Curran, P. 2016. College men's perceptions of their leadership practice: Unpacking power and influence. Journal of Leadership Education, 15(3): 131–150.

Tomaszewska, M., Trafialek, J., Suebpongsang, P. and Kolanowski, W. 2018. Food hygiene knowledge and practice of consumers in Poland and in Thailand-A survey. *FoodControl.* 85:76-84. https://doi.org/10.1016/j.foodcont.2017.09.022.

Tuttle, J., Campbell-Heider, N. and David, T. M. 2006. Positive adolescent life skills training for high-risk teens: Results of a group intervention study. *Journal of Pediatric Health Care*, 20(3): 184–191. doi:10.1016/j.pedhc.2005.10.011

UN Agency Working Group on Population and Development. UNFPA; 2003. Adolescents in India: A Profile. 2003. Available from: http://www.whoindia.org/LinkFiles/Adolescent_Health_and_Development_(AHD)_UNFPA_Country_Report.pdf .

UNESCO 2008. Gender-responsive life skills-based education advocacy brief gender-responsive life skills-based education.

UNFPA 2014. The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future.

UNFPA 2015. Sexual and reproductive health of young people in asia and the pacific: A review of issues, policies and programmers (Vol. 1). Bangkok: Author. doi:10.1017/CBO9781107415324.004

UNICEF 2003. Definition of terms | life skills | UNICEF. Retrieved March 8, 2017, from https://www.unicef.org/lifeskills/ index_7308.html

UNICEF 2010. Life skills-based curriculum project evaluation.

UNICEF 2011. Opportunity in Crisis: Preventing HIV from Early Adolescence to Young Adulthood. 2011. [Last accessed on 2015 Nov 24]. Available from: http://www.unicef.org/media/files/Opportunity_in_Crisis_LoRes_EN_05182011.pdf .

UNICEF 2012. Global evaluation of life skills education programmes.

UNICEF 2015. Review of the life programme: Maldives skills education.

UNICEF India. Available from: http://www.unicef.org/india/hiv_aids_156.htm .

Unusan, N. Consumer food safety knowledge and practices in the home in Turkey. *Food control.* 8(1):45–51. https://doi.org/10.1016/j.foodcont.2005.08.006.

Verma, U.K. Nandan, D., Shrotriya, V.P. 2016. A Comparative study of knowledge and attitude regarding hiv/aids among male and female adolescents of urban slums of Agra. *National Journal of Community Medicine* 7(2):78-80.

Vicary, J.R., Henry, K.L., Bechtel, L.J., Swisher, J.D., Smith, E.A., Wylie, R. and Hopkins, A.M. 2004. Life skills training effects for high and low risk rural junior high school females. *The Journal of Primary Prevention*, 25(4): 399–416. doi:10.1023/ B:JOPP.0000048109.40577.bd

Vivas, A.P., Gelaye, B., Aboset, N., *et al*. 2010. Knowledge, attitudes and practices (KAP) of hygiene among school children in Angolela, Ethiopia. *J Prev Med Hyg,* 51:73-9.

Vygotsky, L.S. 1978. Mind in society. Cambridge, MA, Harvard University Press.

Walpole, M. 2003. Socioeconomic status and college: How SES affects college experiences and outcomes. The Review of Higher Education, 27(1): 45–73. doi:10.1353/rhe.2003.0044

Walter, R.B. 1965. Educational Research-An Introduction, New York: David Mackay Company Inc. pp-36.

Weichold, K. 2014. Translation of etiology into evidence-based prevention: The life skills program IPSY. New Directions for Youth Development, 141: 83–94, 12. doi:10.1002/yd.20088

Weichold, K. and Blumenthal, A. 2016. Long-term effects of the life skills program IPSY on substance use: Results of a 4.5year longitudinal study. *Prevention Science*, 17(1): 13–23.

Weichold, K., Tomasik, M.J., Silbereisen, R.K. and Spaeth, M. 2016. The effectiveness of the life skills program ipsy for the prevention of adolescent tobacco use : The mediating role of yielding to peer pressure. *The Journal of Early Adolescence*, 36(7): 881–908.

Weissberg, R., Sluyter, D. and Bose, S. 1998. Research project updates: Children's social competence and health outcomes. Vol-1, CASEL collections.

Wenzel, V., Weichold, K. and Silbereisen, R.K. 2009. The life skills program ipsy: Positive influences on school bonding and prevention of substance misuse. *Journal of Adolescence*, 32(6): 1391–1401. doi:10.1016/ j.adolescence. 2009.05.008

WHO 1993. Life skills education in schools. WHO/MNH/PSF/93.7A.Rev.2.

WHO 1996. Life Skills: Planning for research. Geneva.

WHO 2001. Regional framework for introducing life skills education to promote the health of adolescents. World Health Project: ICP HSD 002/II.

WHO 2004. Promoting mental health: Concepts, emerging evidence and practice. Geneva: Department of Mental health, Victorian health promotion foundation and University of Melbourne

WHO 2016. Adolescents: Health risks and solutions. Retrieved from http://www.who.int/mediacentre/factsheets/fs345/en/

Yogesh R.K. 2009. A Study and Development of Educational and Life Skill Learning Strategy for the Children of Nomadic and De-Notified Tribes in Maharashtra using Information Communication Technology (ICT). Yashwant Rao Chavan Maharashtra Open University, Nasik, India. Retrieved from http//:www.academia.edu/1121735/Educational_Research_Abstracts

Zafar, 2006. Transformative, model of Life's Skills Basic Education for Gender Impact of Violence, Sexual coercion and Vulnerability to HIV/AIDS through Distance mode of Teacher Training. In www.wikieducator.org/hiv/aids. Retrieved on December, 2009.

Zollinger, T.W., Commings, S.F. and Caine, V. 2003. Impact of the Life Skills Training Curriculum on Middle School Students Tobacco use in Marion County, Indiana. *IRJC International Journal of Social Science & Interdisciplinary Research*. 1(11): 120, ISSN 2277 3630.

APPENDIX-A

Need Assessment Scale of Life Skill Education for Adolescents (NASLSEA)
(Alka Pandey)

*Thank you for being a part of this important study on **Need Assessment of Life skill education for Adolescents**. I appreciate your time in filling up this Questionnaire which will go as a part of my Post Doctoral research in Human Development and family studies Course ----Alka Pandey (Post DoctoralFellow with the Dept of Human Development and Family Studies-GBPUAT, PANTNAGAR).*

- *This is not your exam paper so don't worry for right and wrong answers. I am only asking these questions to know your knowledge and understanding on different aspects of life skill which will help me to design intervention module on life skill training.*
- *Kindly answer ALL questions without fail.*
- *I promise to maintain confidentiality of the information you have filled in, in this questionnaire.*

Section-A

1. Personal Information

Name	Class	Age	Gender	Religion

2. Parental Information

Education of Father	Education of Mother	Family Type	Occupation of Father	Occupation of Mother	Monthly Income
		Single/joint			

Section B
Questionnaire-1

Nutritional Knowledge and Reproductive Health

Q.1 This is important during adolescence Period
1. Complete nutritious food (cereals, pulses, fruits, vegetables etc.)
2. Supplementary food
3. Fast food
4. Do not know

Q.2 Nutritious food is recommended in adolescence period because-
1. There is rapid growth and development during adolescence
2. Nutritious food is required for growth and development in adolescence
3. Both 1& 2
4. Do not know

Q.3 If Nutritious food is not taken during adolescence period
1. Disturbances occur in physical growth and development
2. Decline in physical development

3. Both 1& 2
4. Do not know

Q.4 Adolescent girls can suffer from following if they do not take nutritious food -

1. Pain and Crimps in different parts of body during and after menstrual period and Heavy or less bleeding during menstruation
2. Disturbances in growth physical growth and development, primary and secondary sex characteristics
3. Both 1& 2
4. Do not know

Q.5 Adolescent boys can suffer from following if they do not take nutritious food-77

1. Disturbances in physical growth and development
2. Disturbances in growth of primary and secondary sex characteristics (nocturnal emission, growth of mustache and beard etc.)
3. Both 1& 2
4. Do not know

Q.6.Women nutritional requirement is different from men-78

1. Because both are different in body build, function and activity
2. Both have different choices
3. Both 1& 2
4. Do not know

Q.7.Nutritional requirement during pregnancy- 79

1. Increases to Normal
2. Decreases to normal
3. Both 1&2
4. It does not change

Q.8.Lack of nutritious food during pregnancy can cause-80

1. Abortion
2. Abnormalities and bad health of fetus
3. Health related issues to pregnant woman
4. All of the above

Q. 9. Vaccination is-

1. Easiest way to protect oneself from diseases
2. To take injections
3. Easy way to get rid of it after getting sick
4. Do not know

Q.10. It is important during pregnancy–

1. Nutritious food and proper care
2. Immunization
3. Both A & B
4. Do not know

Q.11. Vaccination is necessary during pregnancy-

1. To protect pregnant mother from infectious diseases
2. To develop immunity against various diseases
3. To protect fetus from infectious diseases
4. All of the above

Q.12. Important Vaccination during pregnancy are-

1. Tetanus
2. Hepatitis

3. Polio
4. Do not know

Q13. Important Vaccination after birth of child-86

1. DPT Booster (diphtheria, tetanus and pertussis)
2. MMR,(Measles, Mumps, and Rubella) DT Booster
3. Both 1 & 2
4. Do not know

Q 14.Vaccination should be done by-87

1. Any untrained person
2. doctors/ nurses/trained person only
3. Both 1 & 2
4. Do not know

Q15. Consumption of cigarette alcohol or any other intoxicant during pregnancy can cause ……to the fetus.

1. Physical disorder
2. Mental disorder
3. Both 1 & 2
4. Don't cause any problem
5. Don't know

Q16. First three months of pregnancy is very crucial for pregnant lady and developing fetus. During this period she should take proper rest, nutrition and doctor's consultation.

1. Yes
2. No
3. Don't know

Q17. Gaining 10-12 kg weight during pregnancy is-

1. Normal
2. Less than normal
3. More than normal
4. Don't know

Questionnaire- 2
Personal, Environmental and Food Related Cleanliness

Sl. NO.	**Statement**	**Yes**	**No**	**Don't Know**
1.	Personal, Environmental and food related cleanliness is helpful in keeping infectious diseases away.			
2.	Healthy life style (Balanced diet, Regular exercise, sufficient rest) keep away infectious diseases.			
3.	Clean and healthy environment is the responsibility of	Every individual	Community	Government
4.	Brushing our teeth daily is must			
5.	Washing of hand after defecation is very important			
6.	One must put hand on the mouth during			

	sneezing or coughing			
7.	Individual must Wash hands after sneezing or coughing			
8.	Washing hand after cleaning garbage is must			
9.	Waste must be kept in closed dustbin			
10.	We should washing hands before eating or touching any food item			
11.	We should always Cover up leftover food			
12.	We must checking expiry date of packaged food before purchasing it			
13.	We must keep our door and window open for clean air			
14.	We must Maintain cleanliness for good health			
15.	We must Use disinfectant for cleaning house			
16.	We must change bed sheet regularly			
17	One must Wash used towel regularly			

Questionnaire- 3

Girl's Personal Hygiene

Q.1.What is the interval of normal menstrual period?

1. Once in 25 days
2. Once in 28 days
3. Once in 30 days
4. Any other please specify

Q.2.What is Duration of blood flow in every month of menstrual period?

1. 1 to 2 days
2. 3 to 5 days
3. 5 to 7 days
4. Don't know

Q.3. What is the reason of irregular menstrual period?

1. Mental discomfort
2. Family stress
3. School stress
4. All of the above
5. Any other please specify

Q.4.The best safety to take during menstruation

1. Sanitary pads available in market
2. Cotton and cloth
3. Only cloth
4. Any other please specify…….

Q.5. What should be used for cleaning and bathing after menstruation?

1. Plain water
2. Lukewarm water
3. Soap and water
4. Disinfectant
5. Anyone can be used

Q.6.What should be the period to change sanitary pad?

1. after every three hours
2. after every four hours
3. after every five hours
4. If any other please specify……..

Q.7. Can we reuse used menstrual clothes after washing?

1. Yes
2. No
3. Some Time
4. Don't Know

Q.8. If menstrual clothes are reused we should wash it with –

1. Plain water
2. Luck warm water
3. Soap and water
4. Disinfectant
5. Anyone can be used

Q.9. What is the correct method of throwing used sanitary napkins?

1. Throwing it in Open litter after wrapping it in paper
2. Throwing it in closed litter after wrapping it in paper
3. Throwing it in toilets
4. Throwing it in river or pond

Q.10. What did you experience during your first menstruation?

1. This is a common, starts with a certain period in all girls
2. Curse from god
3. Disease
4. Any other please specify…….

Q.11. Medium of information about menstruation

1. Mother
2. School
3. Older sister
4. Television
5. Relatives
6. Books
7. News paper

Q.12. What do you use during menstruation?

1. Sanitary pads available in the market
2. Cotton and clothes
3. Only cloth

4. Any other please specify

Q.13. How frequently you change sanitary pads or cloth during menstruation?
1. after every three hours
2. after every four hours
3. after every five hours
4. any other please specify

Q.14. How do you dispose used sanitary pad or cloths?
1. Throwing it in Open litter after wrapping it in paper
2. Throwing it in closed litter after wrapping it in paper
3. Throwing it in toilets
4. Throwing it in river or pond

Questionnaire-4

HIV Knowledge

Sl.No.	Questions	True	False	Don't Know
1.	Have you ever heard about HIV or AIDS	YES	NO	
2.	HIV and AIDS are the same thing			
3.	A person can get HIV from a toilet seat			
4.	Coughing and sneezing DO NOT spread HIV.			
5.	HIV can be spread by mosquitoes.			
6.	A person can get HIV by sharing an injection needle with someone who has HIV.			
7.	AIDS is the disease caused by HIV.			
8.	A person can get HIV by sharing water and food with someone who has HIV.			
9.	All pregnant women infected with HIV will give birth to babies infected with HIV.			
10.	Eating healthy foods can keep a person from getting HIV.			
11.	A person with HIV can look and feel healthy.			
12.	There is a vaccine that can stop adults from getting HIV.			
13.	Some drugs have been made for the treatment of AIDS.			

Questionnaire-5

Drug Abuse

Q.1 Who is most affected from intoxication?
1. Mostly men
2. Mostly Women
3. Mostly Youths
4. Children

Q.2 What are the major problem of drug abuse?

1. Anxiety, depression, Loneliness, Pessimistic thinking
2. Excitement, excessive pleasure, Excessive self confidence
3. Lack of resistance power, Dependency on intoxicants
4. Physical weakness, Anger, Personality disorder, Lack of sleep, Forgetfulness

Q.3. According to your information, which is the top narcotic substance available?

1. Cigarette, Alcohol, Cannabis (Bhang)
2. Intoxicant chewing gum, tablet, patch, powder
3. Injection & Snuff drug

Q.4.What is the top cause of Drug abuse?

1. Teenage curiosity, To thrill, Being provoked by friends
2. To get rid of physical diseases, Psychological problems, Lack of self confidence, No information about the side effects of intoxication
3. Daily problems, Separation of parents, Domestic fights, Strict behaviour of parents
4. Unavailability of other mediums of entertainment
5. Easy availability of cheap intoxicants, Availability of free time, Presence of someone in the house who is involved in extreme drug abuse, Unavailability of Drug de-addiction center around the house

Q.5.On what occasions do people get intoxicated?

1. Before examination, Before the game
2. Before parties, At festivals
3. At home
4. If any other, please specify

Q.6. By which means do people most addictive?

1. by smelling
2. Smoking
3. by mouth
4. by injection
5. any other please mention

Q.7. Do have any idea about government Drug de-addiction center?

1. Yes
2. NO

Q.8. Do you think, Medium of telecommunications (T.V., Radio, News Paper etc.) increases the use of drugs in youths?

1. Yes
2. No

Questionnaire-6

Child Marriage

Q.1.What is child marriage according to you?

1. When both boys and girls are less than18 years at the time of marriage.
2. When boys are less than 21 years and girls are less than 18 years.
3. At the time of marriage both are less than 21 years.
4. At the time of marriage both are less than 15 years.

Q.2. According to you child marriage is-

1. Right
2. Wrong
3. Depends on situation weather it is right or wrong
4. Don't know

Q.3. According to you what should be the correct age of marriage for girls?

1. 1.15 to 18 years
2. 19-25 years
3. 26-30 years
4. after 30 years

Q.4. According to you what should be the correct age of marriage for Boys?

1. 1.15 to 18 years
2. 19-25 years
3. 26-30 years
4. after 30 years

Q.5.Whatcan be the negative consequences of child marriage?

1. Taking more responsibilities in early age
2. facing health related consequences
3. Break up of marriage due to lack of reconciliation
4. Interruption in studies
5. Less chance of employment
6. Child rearing related problem
7. Financial problems in family
8. All of the above

Q.6. Do you think Child marriage is more permanent than normal marriage?

1. Yes 2. No

Q.7. Do you know someone who is happy with child marriage?

1. Yes
2. No
3. If yes please write down

Q.8. Have you ever heard of child bride or seen any news related to it on the internet or television?

1. Yes 2. No

Q.9. What is the main reason of child marriage according to you?

1. Tradition and custom
2. Illiteracy
3. Security of girls
4. Absence of father in the family
5. If any other please mention

Q.10. Do you know that there is some laws against child marriage?

1.Yes it's their
2.No it's not their
3.Don't know

Questionnaire-7

Gender Imbalance

S.L. NO.	Statement	Options				
Q.1	Cooking food at home	Only Females	Only Males	Both Males and Females	Other members of Family	Don't Know
2.	Washing clothes and cleaning					
3.	Taking care of kids, giving them bath, feeding them and changing their clothes.					
4.	Helping kids to complete Home Work					
5.	Doing post office work					
6.	Bringing groceries					
7.	Paying electricity bill					
8.	Ploughing the field					
9.	Talking to relatives on phone					
10.	Booking Train Tickets					
11.	Taking important decisions for kids					

S.L. NO.	Statement	Agree	Disagree	Don't know
12.	The meaning of gender equality is both male and female are same and female have all the rights			

	which males have in our society.			
13.	Females are also working in the society as males it means they are occupying male's occupation.			
14.	The major responsibility of females are taking care of their home and preparing food for family members.			
15.	Taking final decisions for the family should be the responsibility of males.			
16.	It is only female's responsibility to not get pregnant.			
17.	To keep family together females should tolerate domestic violence at certain level.			

Q18. Is there any law in our country where fathers get paternity leave during the birth of their baby?
1. Yes
2. No
3. Don't know

Q.19. If yes then what is the duration of leave?
1. Less than a week
2. 15 Days
3. 3-4 weeks
4. 4-5 months
5. More than five months

Q.20.Is there any law in our county where mothers get maternity leave during the birth of their baby?
1. Yes
2. No
3. Don't Know

Q.21. If Yes then what is the duration of leave?
1. Less than a week
2. 15 Days
3. 3-4 weeks
4. 4-5 months
5. More than five months

Q.22. Is there any law in our country which protects females from domestic violence?
1. Yes
2. No
3. Don't Know

Q.23. According to you law of Divorce give decides in whose favor?
1. Males
2. Females
3. Not in favor of anyone
4. For both of them equally

Questionnaire-8

Career Counselling Questionnaire

Q.1. Do you know about career counselling?
1. Yes
2. No

Q.2. According to you what should be the correct age for career counselling?
1. Before completing 15 years
2. 15 to 20 years
3. 21 to 25 years
4. 26 to 35 years
5. 35 years or after that

Q.3. Have you decided your future aim?
1. Yes
2. at some extent
3. No
4. Don't Know

Q.4.Whatdo you want to be in future? (Please tick)

Engineer, Doctor, Teacher, Police officer, Politician, Businessman, Scientist, I.A.S / P.C.S. officer, Writer, Bank officer, Fashion Designer, News Reader, Reporter, Dietician, Counselor, Army officer (if other than this please mention ……..)

Q.5.Whydo you want to select above profession?
1. Due to interest
2. Due to your Ability
3. Due to your need
4. To fulfill your Aim
5. Due to family pressure

Q.6. Do you have all the necessary resources available to achieve your goal?
1. Yes
2. No
3. Yes, but insufficient
4. Don't Know

Q.7.Whoseadvices have you taken or would you like to take while selecting your future aim (profession)?
1. Teacher
2. Friends / seniors
3. Older siblings
4. Mother and Father
5. Any other (Please write)

Q.8. Who will decide in which direction you want to proceed in?
1. I Myself
2. Mother/father
3. Older siblings
4. Any other family member
5. Teacher
6. Don't Know

7. Any other please specify…….

Q.9. Do you try to know the new inventions, in the direction of your future interest/profession?
1. Yes
2. No
3. Some Time
4. Don't Know

Q.10.On which of the following medium you are dependent on your career related information?
1. News paper
2. T.V.
3. Radio
4. Internet
5. Information From others
6. Any other please specify…….

Q.11. Does career counseling reveal future scope in the field of our interest?
1. Yes
2. No

Q.12. Does career counselling help students to take their own decision about their profession?
1. Yes
2. No
3. To some extent
4. Don't Know

Q.13. Do you think, that all the government and private schools should have career counselling facility?
1. Yes
2. No
3. Don't know

Questionnaire-9

Leadership Skills

SL. NO	Statement	Never	Some Times	Always
1.	Always ready to help others			
2.	Give importance to others suggestion			
3.	Always think that I am right			
4.	Get panic in small things			
5.	Give importance to every member when working in group			
6.	To be liked by all members of group			
7.	When working in group your suggestions are liked by other members of group.			
8.	Facing all difficulties patiently when it comes			
9.	Working together with other members of group for the goal when working in group			

10.	Utilizing time properly			
11.	To compel other members in group to listen you			
12.	Always Take care of others emotion			
13.	Scold or fight with others for small mistakes			
14.	Trust others easily			
15.	Always do or want to do the best			
16.	Learn any new things easily or ready to learn new things			
17.	Take decisions easily and quickly			
18.	Talking and laughing less with others			

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Email: jd_extn@iari.res.in
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MOBILIZATION
Society for community mobilization for sustainable development
ICAR- Indian Agriculture Research Institute
New Delhi – 110012

No. : 05, Mob/21
Date: 07.05.2021

Acceptance Letter

Dear Dr. Alka Pandey,

Thank you for submitting your research paper entitled "**Addressing knowledge gaps in adolescent nutrition and reproductive health: toward advancing life skill education and sustainable development**" by **Alka Pandey and Rita Singh Raghuvanshi.**

The paper has been reviewed and accepted for the publication Journal of Community Mobilization and Sustainable Development.

Regards

Rajarshi Ray Burman

Dr. R. R. Burman
Editor
Journal of Community Mobilization and Sustainable Development

Dr. Alka Pandey
Post-Doctoral Fellow
Department of Human Development and Family Studies
College of Home Science
G. B. Pant University of Agriculture and Technology
Pantnagar

Addressing knowledge gaps in adolescent nutrition and reproductive health: toward advancing life skill education and sustainable development

ALKA PANDEY*[1] AND RITA SINGH RAGHUVANSHI[2]**

1Post-Doctoral Fellow and 2 Professors

1Department of Human Development and Family Studies, College of Home Science, G.B.Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

2Department of Food and Nutrition, College of Home Science, G.B.Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

ABSTRACT

Adolescence is a crucial period of growth in the life course. WHO also suggests the importance of adolescent's physical and reproductive health and life skills education in maintaining their physical and emotional well-being. Adolescents physical and reproductive health (ARH) and life skills education (LSE) also enhances their ability to be healthy and remain free from too-early or unwanted pregnancy, unsafe abortion, sexually transmitted diseases (STDs) including HIV/AIDS, and sexual violence and coercion, sexual assault, rape and prostitution, malnutrition, unsafe abortion etc.. Life skills are behaviors that enable individuals to adapt to and deal effectively with the demands and challenges of life. For improving adolescent nutritional health and well-being it is very important to assess the present status of adolescent's knowledge in this area. The current paper attempts to study the nutritional and reproductive health knowledge of more than 4000 adolescents both boys and girls of 13-18 years, lives in different blocks of Udham Singh Nagar. A pre-designed, pretested and self-structured questionnaire was used for this purpose. Results of the study indicates that 50 percent of studied population had poor knowledge regarding nutrition and reproductive health 39 percent of studied respondents had average level of knowledge and only 11 percent of respondents had good level of knowledge. To improve adolescent's condition it is important to provide them nutritional supplementation, food system and dietary intake interventions, integration with sexual and reproductive health strategies along with appropriate information regarding nutrition and reproductive health.

Key Words – Adolescence, Adolescent health, Life skills education, Reproductive health, Interventions

INTRODUCTION

According to World Health Organization, adolescents are people between 10 and 19 years of age. Adolescents make approximately 20% of the world's population, of whom 85% live in developing countries. Adolescence is characterized by significant physiological, psychological and social changes that put them for high risk of nutritional and reproductive health problems. This has partially been because adolescents were considered to be relatively healthy, without a heavy "burden of disease" (WHO, 1999, 2005)

The concern about adolescent nutritional and reproductive health has grown due to unprecedented increasing rates of sexual activity, early pregnancies and sexually transmitted

infections (STI) including human immune deficiency virus (HIV) among adolescents (Shivaram et.al, 2011 & Hughes J, Mc Cauley AP 1998).

Despite 35% of the world population being in the 10–24 age groups, the reproductive health (RH) needs of adolescents have neither been researched nor addressed adequately (Ayalew et.al, 2008). There are very few studies on knowledge, attitude and practice of adolescents in relation to their nutritional and reproductive health knowledge are available. To improve the nutritional status of adolescents and improve their knowledge regarding reproductive health it is important to plan "age-appropriate" interventions to address the diverse needs (FMoH , 2006 & Zhiyong et.al, 2011).

METHODOLOGY

Objectives:

This study was undertaken with the following objectives:

- To find out the status of nutritional and reproductive health knowledge among adolescent of Udham Singh Nagar.

- To know the impact of selected independent variables such as class, gender, age, overall family income, father's and mother's education and occupation on dependent variable which was nutrition and reproductive health knowledge of adolescents.

Local of the study and selection of the sample:

The study was conducted in different blocks of Udham Singh Nagar, Uttarakhand India. Respondents belonged to 13-18 years, studying in 7 to 12 standard were the study population. From each block approximately 572 respondents from different government schools and different block of Udham singh nagar were selected as a sample. From which half of them were boys and half of them were girls. Total 4230 respondents were selected for the present study.

Study Design, Tools and Techniques:

A pre-designed, pretested and self -structured questionnaire was prepared and used for the collection of data. Schools for the study purpose were selected randomly from each block but students from each class were selected purposively for data collection. Only those respondents who were willing to fill the questionnaire were included for the study purpose.

Procedure:

For data collection all the principals and teachers of the selected schools were contacted and permission was taken from them for data collection. The investigator assisted the respondents in filling up the questionnaire. The purpose and the nature of the study were explained to the respondents. Questionnaire which was used for the study included questions related to the awareness and knowledge regarding nutrition and reproductive health of adolescents of Udham singh nagar. After data collection knowledge scores of respondents were obtained to know their current knowledge regarding nutrition and reproductive health which will help the investigator to plan interventions and life-skill training on the basis of acquired scores of respondents.

Data analysis:

Quantitative data from the survey was analysed using proportions through Windows Microsoft Excel software and SPSS. Frequency, percentages and Chi square test were calculated for data analysis.

Ethical consideration:

Rights, anonymity and confidentiality of the respondents were respected at all the stages of study. Informed verbal consent was taken from the respondents before collecting data. Through verbal consent process, the type and purpose of the survey; issues of anonymity and confidentiality; voluntary participation and freedom to discontinue to fill the questionnaire at any stage; and absence of any known risk or benefit for participating in the study was explained beforehand. To preserve anonymity, all findings are presented without ascribing names or identifiable personal description. All participants were informed, that their participation is voluntary and that the collected data would be only used for the purpose of the study as well as for their benefit.

Limitations of the study:

- The respondents were selected purposively. Only those respondents who were willing to fill the questionnaire were selected for the study.
- The study only includes Government school students.
- The survey questionnaires though made in Hindi contained some technical terms; many respondents had difficulty in understanding parts of it. The researcher acted as translator by explaining the terms to them.

RESULTS AND DISCUSSION

UN report mentioned that one in every five persons on the earth is an adolescent aged between 10-19 years, and 85% of these adolescents live in developing countries. An estimated 1.7 million adolescents die every year mainly from accidents, violence, pregnancy related problems or illnesses that are either preventable or treatable. As per study, the majority has no idea about the changes associated with puberty (e.g., menstruation or wet dreams) until they experience them, though the strong family structure plays a major role in the lives of adolescents

but it fails to respond to their needs for reproductive health information. An estimated 1.7 million adolescents die every year mainly from accidents, violence, pregnancy related problems or illnesses that are either preventable or treatable. The best investment in and education and health sector should go to this segment of population to shape the future of mankind. Knowing the importance of awareness and education in this area need assessment survey was planned to know the present knowledge of adolescents and need of education and training in this area so LSE can be planned for adolescents. In carrying out this study, questionnaire was administered to respondents (students) in their various schools to collect relevant data. The data collected from the respondents were analyzed, interpreted and presented below.

Table 1.1: Association between demographic variables and knowledge on nutrition and reproductive health

Variables		**Poor f (%)**	**Average f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total Respondents	N=4230 (100)	2109 (50)	1663 (39)	458 (11)	189.8	**0.001 (S)**
Block	Gadarpur	331 (46.6)	314 (44.2)	66 (9.2)		
	Jaspur	414 (58.6)	218 (30.8)	75 (10.6)		
	Kashipur	228 (31.6)	364 (50.4)	130 (18.0)		
	Kichha	414 (58.5)	241 (34.1)	52 (7.4)		
	Rudrapur	315 (46.1)	306 (44.9)	62 (9.0)		
	Sitarganj	407 (58.1)	220 (31.4)	73 (10.5)		
Class	7th	360 (51.2)	291 (41.4)	52 (7.4)	198.32	**0.01 (S)**
	8th	466 (59.7)	271 (34.8)	43 (5.5)		
	9th	412 (62.4)	204 (31.0)	44 (6.6)		
	10th	319 (46.1)	288 (41.6)	85 (12.3)		
	11th	236 (33.6)	341 (48.5)	126 (17.9)		
	12th	316 (45.7)	268 (38.7)	108 (15.6)		
Gender	Female	700 (32.4)	1041 (48.2)	419 (19.4)	656.6	**0.001 (S)**
	Male	1409	623	39		

		(68.0)	(30.0)	(2.0)		
Age	Less than or equal to14 years	1181 (54.5)	818 (37.8)	167 (7.7)	61.9	**0.001 (S)**
	Greater than 14 years	928 (45.0)	845 (41.0)	291 (14.0)		
Income	Less than 1500	385 (41.6)	434 (47.0)	105 (11.4)	92.9	**0.001 (S)**
	1501-3000	525 (57.5)	287 (31.4)	101 (11.1)		
	3001 to 8000	543 (53.9)	384 (38.1)	81 (8.0)		
	More than 8001	358 (46.9)	271 (35.5)	134 (17.6)		
Religion	Hindu	1120 (46.8)	959 (40.1)	311 (13.1)	84.7	**0.001 (S)**
	Muslim	989 (54.7)	672 (37.2)	146 (8.1)		
	Punjabi	15 (45.45)	15 (45.45)	3 (9.09)		
Fathers Education	Graduation	38 (59.4)	16 (25.0)	10 (15.6)	115.90	**0.001 (S)**
	ITI	0 (0.0)	0 (0.0)	3 (100.0)		
	MBA	0 (0.0)	4 (100.0)	0 (0.0)		
	Master	16 (34.1)	22 (46.8)	9 (19.1)		
	Primary	332 (47.4)	300 (42.8)	69 (9.8)		
	Six to Intermediate	667 (45.2)	573 (38.8)	235 (16.0)		
	Uneducated	681 (55.1)	480 (38.8)	75 (6.1)		
Mothers Education	BA	32 (36.4)	16 (18.1)	40 (45.5)	160.7	**0.001 (S)**
	Primary	204 (46.8)	197 (45.2)	35 (8.0)		
	Uneducated	1052 (50.9)	845 (40.9)	168 (8.2)		
	Six to Intermediate	391 (45.4)	324 (37.6)	147 (17.0)		
Type of Family	Joint	484 (46.3)	436 (41.7)	126 (12.0)	7.4	**0.02 (S)**
	Single/Nuclear	1625 (51.0)	1227 (38.5)	332 (10.5)		

Fathers Occupation	Business	263 (55.7)	141 (29.9)	68 (14.4)	68.11	**0.001 (S)**
	Farmer	279 (49.6)	205 (36.5)	78 (13.9)		
	Labour	1279 (47.6)	1152 (43.0)	253 (9.4)		
	Service	252 (57.4)	129 (29.4)	58 (13.2)		
	Unemployed	46 (49.3)	26 (49.3)	1 (1.4)		
Mothers Occupation	Business	5 (55.55)	2 (22.2)	2 (22.2)	32.2	**0.001 (S)**
	Farmer	15 (50.0)	12 (40.0)	3 (10.0)		
	Housewife	1888 (50.0)	1465 (38.7)	428 (11.3)		
	Labour	254 (62.8)	124 (30.6)	26 (6.4)		
	Service	3 (50.0)	2 (33.33)	1 (16.66)		

A total of 4230 students were studied, of whom 50 percent respondents had poor knowledge, 39 percent respondents had average knowledge and only 11 percent had good knowledge regarding nutrition and reproductive health. A study conducted on Wolaita Sodo University students supports the present research findings which says, that the level of knowledge of students about reproductive and sexual rights was found to be low. The study suggests that Ministry of Education has to incorporate reproductive and sexual rights in the curricula of high schools and institutions of higher learning otherwise reproductive health targeted Millennium Development Goals will not be achieved without improving access to reproductive health. This study was aimed to assess knowledge of reproductive and sexual rights as well as associated factors among adolescents (Adinew et.al, 2013). In another study which was conducted in Cairo city says that status of adolescent's health was improved after getting intervention. There is a statistically significant improvement between pre-test and post-test results regarding nutrition, personal hygiene, exercise, follow-up, sleep, and reproductive health. Continuous health educational program was recommended by using suitable strategies (Rasmia & Ebtisam, 2015). When we correlate the results of above two studies with the present study conducted in Udham singh nagar, we can conclude that nutrition and reproductive health knowledge of almost more than fifty percent of adolescents residing in developing countries are deficient. Suitable intervention and follow up programme in the form of life skill training is recommended for school going adolescents to improve their knowledge and health conditions.

The data presented in table 4.3 presents association between demographic variables and knowledge on nutrition and reproductive health. The table reflects that majority of the respondents (18.0%) from Kashipur block had good knowledge about nutrition and reproductive health followed by respondents from Jaspur (10.6%), Sitarganj (10.5%). More than half of the respondents from Jaspur (58.6%), Kichha (58.5%) and Sitarganj (58.1%) were found to have poor knowledge regarding this aspect. The result was found to be statistically significant

($p<0.001$). Therefore, it can be concluded that locale has association with the knowledge level of nutritional and reproductive health.

A study conducted in slums of Chennai coincides with the present findings which also found that adolescent girls living in slums are vulnerable to poor reproductive health due to lack of awareness about reproductive health and low life skills. These girls are in a crucial stage of their life cycle and their health can impact the health of future generations. Despite adolescents comprising almost one-quarter of the Indian population they are ill served in terms of reproductive health. There is a high prevalence of menstrual/reproductive morbidity, self-treated abortion and low knowledge about modes of HIV transmission/prevention and use of contraceptives among adolescent girls in slums in Chennai (Sharanya, 2014). After assessing the findings of present study and supporting studies we can conclude that there is an urgent need to initiate community-level life skill education, sex education and behaviour change communications to improve the health conditions of adolescents.

As far as class is concerned it was found by the study that maximum percentage of subjects who were in class 11^{th} (17.9%), followed by class 12^{th} (15.6%) and 10^{th} (12.3%) were found to have better knowledge in comparison to junior class subjects which is quiet obvious. More than half (62.4%) of the subjects studying in class 9^{th} were found to have poor level of knowledge followed by those studying in class 8^{th} (59.7%) and 7^{th} (51.2%). It was found that as class increases respondents level of knowledge on the particular aspect also increases. Statistically, the difference was found to be significant inferring that class has association with knowledge level. The reason of increase in the knowledge level of higher class students regarding the topic can be the availability of the study material in the course curricula.

To assess the knowledge regarding reproductive health among women and the associated socio-demographic factors total 345 women of age group 15-44 years were selected from 28 villages. Data on knowledge of reproductive health were collected by using a modified interview schedule. Results of the study indicated that out of 345 study population; only 19% had adequate knowledge on reproductive health. The proportion of women who had adequate knowledge in each domain was marriage and pregnancy (47.5%), menstruation (29.9%), contraception (17.4%) and reproductive tract infections (15%). So we can conclude from the above study that knowledge regarding reproductive health was inadequate among women in reproductive age group in rural areas (Jose et.al, 2019).

Further probing into the above table it was found that majority of the females had good (19.4%) to average (48.2%) level of knowledge compared to their counterpart i.e. 2.0 percent and 30.0 percent boys fall in good and average level knowledge category respectively. But when we see the overall picture it was found that a very large percentage of women and men had poor knowledge regarding nutrition and reproductive health issues. Statistically the difference was found to be significant.

Further, age related data depicts that with age the knowledge level increase as majority of the children with age more than 14 years fall in the category of good (14.0%) or average (41.0%) level of knowledge category. The difference was found to be highly significant.

The maximum percentages (17.6%) of respondents with family income more than 8000 were found to have good level of knowledge. The respondents from low income families showed poor level of knowledge. Statistically, the result was found to be significant.

Religion wise among Hindus 13.1 percent were found to have good level of knowledge whereas 46.8 percent were found to have poor level of knowledge. 40.1 percent were found to have average level of knowledge. Among Muslims 54.7 were found to have poor level of knowledge followed by 37.2 percent as average and 8.1 percent as good knowledge level.

Among Punjabi respondents, 45.45 percent were found to have average knowledge while 45.45 percent had good knowledge regarding nutrition and reproductive health and 9.09 percent Punjabi respondent were in poor knowledge category. The difference was found to be statistically significant ($p<0.001$).

When we talk about father's education it was found that Irrespective of education mostly fathers had poor knowledge regarding reproductive health and nutrition. The subjects whose fathers were educated upto Graduation or post graduation showed some what good to average level of knowledge compared to others. Majority of subjects (100%) whose fathers had done ITI showed good knowledge level similarly 100% subjects were found to have average knowledge level whose fathers have done MBA though the numbers of such respondents were very low. More than half (55.1%) of the respondents had poor knowledge level whose fathers were uneducated. The difference was found to be statistically significant represents education of father impacts the knowledge level of their kids.

Further probing into mothers' education, it was found that half of the respondents (50.9%) whose mothers were uneducated showed poor to average (40.9) knowledge level whereas 45.5 percent of respondents whose mothers were educated showed good knowledge level. Statistically, the result was found to be highly significant.

The respondents (12.0%) who lived in joint family showed good knowledge level in comparison to those who live in single/nuclear family (10.5%). 41.7 percent and 38.5 percent of respondents who live in joint family and nuclear family respectively had average level of knowledge. More than half (51.0%) of the respondents depicted poor knowledge level who lived in nuclear family. The difference was found to be significant at 0.05 level of significance.

Approximately 50 percent of the respondents, irrespective of their parent's education had poor knowledge regarding reproductive health and nutrition. Only 14.4 percent of respondents showed good knowledge level followed by 13.9 percent and 13.2 percent whose father were businessman, farmer and service class respectively. Small percentage of respondents (1.4%) showed good knowledge level even after father being unemployed while rest of the respondents showed average knowledge level regarding the issue. The difference was found to be statistically significant.

Further, it was found that approximately more than 50 percent of the respondents, irrespective of their mother's occupation had poor level of knowledge regarding reproductive health and nutrition. It was also very surprising to note that good percentage of respondents had average level of knowledge 22.2 percent, 40.0, percent 38.7 percent, 30.6 percent and 33.33 percent whose mothers were in Business, Farming, Housewives, Labors and in service respectively. Statistically, the difference was found to be highly significant.

Thus, It is pertinent from the table that locale, type of family, class of children, gender, age, family income, religion, parents education and occupation has significant association with the nutritional and reproductive health related knowledge.

Many studies also supports the above research findings which says that poor reproductive health is due to lack of knowledge, lack of access and lack of availability of services. In rural areas knowledge regarding menstrual hygiene practices and sexually transmitted diseases are very poor (Manjula et.al, 2012 & Bobhate & Shrivastava 2011). Regular health education regarding menstruation, menstrual hygiene, family planning methods, reproductive tract infections to women of the reproductive age group improves the maternal and child health. Study also found that reproductive health depends on economic status, education, employment and the living conditions. So, the empowerment of women through education is very important for a good sexual and reproductive health (Jain & Anand 2016).

REFERENCES

Alemayehu S, Fantahun M. 2006. Reproductive health needs of out-of-school adolescents: a cross-sectional comparative study of rural and urban areas in northwest Ethiopia. Ethiop. *J.Health Dev*. 20 (1): 10-17.

Ayalew T, Meseret Y, Yeshigeta G. 2008. Reproductive health knowledge and attitude among adolescents: a community-based study in jimma town, southwest Ethiopia. *Ethiop J Health Sci.* 2008, 22 (3): 143-151.

Bobhate, P. and Shrivastava, S. 2011. A cross sectional study of knowledge and practices about reproductive health among female adolescents in an urban slum of Mumbai. *J Family Reprod Health.* 5(4):117-24.

FMoH: National reproductive health strategy, 2006–2015: national document. 2006, Addis Ababa, Ethiopia

Hughes J, McCauley AP. 1998. Improving the Fit: Adolescents' needs and future programs for sexual and reproductive health in developing countries. *Studies in Family Planning*. 29 (2): 233-245.

Jain, R. and Anand, P. 2016. Awareness of pubertal changes and reproductive health in adolescent girls: a comparative study. *Int J Community Med Public Health.* 3(12):3313-9.

Jose, M.J., Farah, F.F., Joseph, S.T. and Fernandez, A.C. 2019. Knowledge regarding reproductive health among women of reproductive age group in three sub-centre areas of a primary health center, Sarjapur, Bengaluru, Karnataka: a cross sectional study. *International Journal of Community Medicine and Public Health*, 6(9): 4082.

Manjula R., Kashinakunti S.V., Geethalakshmi, R.G., Sangam, D.K. 2012. An educational intervention study on adolescent reproductive health among pre-university girls in Davangere district, *South India. Ann Trop Med Public Health*. 5(3):185-9.

Prentice AM, Ward KA, Goldberg GR, Jarjou LM, Moore SE, Fulford AJ, Prentice A.2013. Critical windows for nutritional interventions against stunting. *Am J Clin Nutr*. 97(5):911–8.

Rasmia Abd-El Sattar Ali, Ebtisam Mohamed Abd-El Aal. 2015. Effect of Health Educational Program for Females Blinded Adolescents Students regarding Reproductive Health, *American Journal of Nursing Science*, 4(1): 1-8.

Sharanya, T. 2014. Reproductive health status and life skills of adolescent girls dwelling in slums in Chennai. *Natl Med J India*, 27(6): 305-10.

Shivaram K, Nandini C, Malleshappa1 K. 2011. Knowledge and attitude about reproductive health among rural adolescent girls in Kuppam mandal: an intervention study. *Biomed Res.* 22 (3): 305-310.

WHO. 2017. Global Accelerated Action for the Health of Adolescents (AA-HA!): guidance to support country Implementation. Geneva: WHO.

World Health Organization and Deutsche Gesellschaft fuer Technische Zusammenarbeit (GTZ) GmbH. 2005. Sexually transmitted infections among adolescents: the need for adequate health services. Geneva: WHO Library Cataloguing-in-Publication Data.

WHO. 1999 Programming for adolescent health and development report of WHO/UNFPA/UNICEF study group on programming for adolescents health. Geneva: WHO

Zhiyong L, Minmin Z, Hassen H, Zi L, Shuhua S, Zengzhen W. 2011. Reproductive health knowledge and services utilization among unmarried rural-to-urban migrants in three major cities, China. *BMC Public Health*. 11 (74): http://www.biomedcentral.com/1471-2458/11/74.

Telephone: 011 25842387
Fax No: 011 25842387
Email: jd_extn@iari.res.in
journalmobilization@yahoo.com
Regd. No. 268/Ag-33221

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Society for community mobilization for sustainable development
ICAR- Indian Agriculture Research Institute
New Delhi – 110012

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Acceptance Letter

Dear Dr. Alka Pandey,

Thank you for submitting your research paper entitled "**Life skill education: an assessment of personal, environmental and food related hygiene and cleanliness knowledge of adolescents of Udham Singh Nagar**" by **Alka Pandey and Rita Singh Raghuvanshi.**

The paper has been reviewed and accepted for the publication Journal of Community Mobilization and Sustainable Development.

Regards

Rajarshi Ray Burman

Dr. R. R. Burman
Editor
Journal of Community Mobilization and
Sustainable Development

Dr. Alka Pandey
Post-Doctoral Fellow and Professor
Department of Human Development and Family Studies
College of Home Science
G.B. Pant University of Agriculture and Technology
Pantnagar

Life skill education: an assessment of personal, environmental and food related hygiene and cleanliness knowledge of adolescents of Udham Singh Nagar

ALKA PANDEY*[1] AND RITA SINGH RAGHUVANSHI [2]**

[1]Post-Doctoral Fellow and [2] Professor

[1]Department of Human Development and Family Studies, College of Home Science, G.B. Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

[2]Department of Food and Nutrition, College of Home Science, G.B. Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

ABSTRACT

Adolescence is the crucial period of transition in life. It requires proper knowledge on personal, environmental and food related hygiene and sanitation for maintaining good health. Lack of timely awareness and knowledge on these matters may cause complications for individuals in further life. In developing country like India, adolescents face challenges in identifying their true health and hygiene status. When these issues are not adequately addressed, the adolescent's self-awareness suffers and health and hygiene-related problems results. Udham Singh Nagar of Uttarakhand is no exception to this phenomenon. Consequently, there is a need to understand the barriers that impede adolescents' awareness of health, nutrition, and hygiene-related issues. These barriers obstruct adolescents from achieving a better life style which is only possible when they are aware of their future health and hygiene needs. To know the present knowledge of adolescents on these issues and plan life skill programme to train them, a need assessment survey on personal, environmental and food related cleanliness knowledge of adolescents studying in government schools in different blocks of Udham Singh Nagar was conducted. For this purpose more than 4000 adolescent boys and girls who are in the age group of 13 to 18 years studying in 7^{th} to 12^{th} standard were selected. A pre-designed, pretested and self-structured questionnaire was used for data collection. Results of the study indicates that approximately one third of studied respondents had poor knowledge regarding personal, environmental and food related cleanliness whereas others had average to good level of knowledge regarding the present issues. It was also found that girls were more aware regarding personal, environmental and food related cleanliness compared to boys. Study also indicated that adolescents had inadequate knowledge of physiological changes, sex-related matters, dietary intake, and personal hygiene. Adolescents whose family income was low and whose parents were not educated especially their mother's were more vulnerable.

Key words- Adolescence, health, hygiene, cleanliness, nutrition, awareness, life skills education

INTRODUCTION

The word Hygiene has evolved from the Greek term "Hygeia" which means "Goddess of Health". Hygiene can be defined as, "The science and art which is associated with the preservation and promotion of health", Keshav (2008).

Personal, environmental and food related hygiene and cleanliness includes different habits i.e., keeping our body clean like washing hands and brushing teeth, handling cooked and uncooked food hygienically and keeping our surrounding clean, which keep bacteria, viruses and fungal far away from us. Good personal, environmental and food related hygiene and cleanliness will help an individual to keep feeling good about their self. Since those individuals who do not maintain their personal environmental and food related hygiene and cleanliness i.e., they wear dirty clothes, have body odor and bad breath, live in dirty place and consume unhealthy food will suffer from discrimination and infectious diseases. This wills mainly lead to psychological and health complications. But the most important point in this subject is that all people have their own hygiene but some people do it better than others, this mainly depends on each person's culture, society and family norm, Rasool (2012).

Maintaining Good personal, environmental and food related cleanliness among school going adolescents could be effective towards preventing infectious diseases. By Maintaining proper hygiene and cleanliness among individuals and communities can reduce threats especially by communicable diseases, thereby improving the overall health of a community. Based on population health analysis Winslow CEA (1920), Sixty-two percent and 31% of all deaths in Africa and Southeast Asia, respectively, are caused by infectious disease Curtis VA (2009). This trend is especially notable in developing countries where acute respiratory and intestinal infections are the primary causes of morbidity and mortality among young children WHO (2009)

An adolescent holds vast amount of liveliness, positive energy and resources for their country, and wish to be revered upon, appreciated and accepted accordingly. They need this unlimited energy, vitality and idealism, for fulfilling a robust urge to experiment and explore in order to make a better world. The world is currently having one among the biggest reservoirs of youth population i.e. 1.8 billion out of the full population compared to past decades (UNFPA, 2014). There are seventeen developing countries within the world whose half the population age is a smaller than eighteen years. Republic of India is home to quite 243 million people aged between 10-19 years that accounts for 2 hundredth of the entire population of the country. Despite 35% of the world population being in the 10–24 age groups, the personal, environmental and food related hygiene and cleanliness knowledge of adolescents have neither been researched nor addressed adequately. There are very few studies on knowledge, attitude and practice of adolescents in relation to their personal, environmental and food related hygiene and cleanliness. To improve the knowledge of adolescents on these issues it is important to plan "age-appropriate" interventions to address their diverse needs. Keeping these issues in mind present study was planned to know the adolescent's present knowledge on personal, environmental and food related hygiene and cleanliness and plan suitable intervention programme accordingly.

METHODOLOGY

Objectives:

This study was undertaken with the following objectives:

- To find out the status of personal, environmental and food related cleanliness knowledge of adolescents of Udham Singh Nagar

- To know the impact of selected independent variables such as class, gender, age, overall family income, father's and mother's education and occupation on dependent variable which was, personal, environmental and food related cleanliness knowledge of adolescents of Udham Singh Nagar.

Local of the study and selection of the sample:

The study was conducted in different blocks of Udham Singh Nagar, Uttarakhand India. Respondents belonged to 13-18 years, studying in 7 to 12 standard were the study population. From each block approximately 572 respondents from different government schools and different block of Udham Singh Nagar were selected as a sample. From which half of them were boys and half of them were girls. Total 4230 respondents were selected for the present study.

Study Design, Tools and Techniques:

A pre-designed, pretested and self -structured questionnaire was prepared and used for the collection of data. Schools for the study purpose were selected randomly from each block but students from each class were selected purposively for data collection. Only those respondents who were willing to fill the questionnaire were included for the study purpose.

Procedure:

For data collection all the principals and teachers of the selected schools were contacted and permission was taken from them for data collection. The investigator assisted the respondents in filling up the questionnaire. The purpose and the nature of the study were explained to the respondents. Questionnaire which was used for the study included questions related to the awareness and knowledge regarding nutrition and reproductive health of adolescents of Udham Singh Nagar. After data collection knowledge scores of respondents were obtained to know their current knowledge regarding nutrition and reproductive health which will help the investigator to plan interventions and life-skill training on the basis of acquired scores of respondents.

Data analysis:

Quantitative data from the survey was analysed using proportions through Windows Microsoft Excel software and SPSS. Frequency, percentages and Chi square test were calculated for data analysis.

Ethical consideration:

Rights, anonymity and confidentiality of the respondents were respected at all the stages of study. Informed verbal consent was taken from the respondents before collecting data. Through verbal consent process, the type and purpose of the survey; issues of anonymity and confidentiality; voluntary participation and freedom to discontinue to fill the questionnaire at any stage; and absence of any known risk or benefit for participating in the study was explained beforehand. To preserve anonymity, all findings are presented without ascribing names or identifiable personal description. All participants were informed, that their participation is voluntary and that the collected data would be only used for the purpose of the study as well as for their benefit.

Limitations of the study:

- The respondents were selected purposively. Only those respondents who were willing to fill the questionnaire were selected for the study.
- The study only includes Government school students.
- The survey questionnaires though made in Hindi contained some technical terms; many respondents had difficulty in understanding parts of it. The researcher acted as translator by explaining the terms to them.

RESULTS AND DISCUSSION

Personal, environmental and food related hygiene and sanitation is a major problem in developing countries and remains high risk behaviour among school going children. Over 1.9 billion school days could be gained if safe water supply and sanitation are achieved and the incidence of diarrhoeal illness is reduced (UNICEF & WHO 2012). Hygiene is a very personal subject, and encouraging changes in hygiene requires skill and care. The United Nations reported that there are 2.5 billion people who still do not use an improved sanitation facility and over 1 billion practicing open defecation. Diarrhoea is the largest cause of under-five mortality globally in developing countries due to poor personal hygiene practices. In sub-saharan Africa, 44% of the populations use either shared or unimproved facilities or an estimated 26 % practice open defecation (WHO 2012).

Health and health related problems are prevalent among school children, and adolescents in low income countries, partly due to their needs, have been largely ignored by the national policies, strategies and programs of the countries (UNICEF & WHO 2012, UNESCO 2000). School children and adolescents are at their critical period in the lifetime that determines their current and future behaviors and risk factors related with health. If they are equipped with health promoting skills at this stage, they are more likely to adopt and sustain these behaviors throughout their lifetime (UNESCO, UNICEF, WHO 2000, Rodrigo & Aranceta 2003, Rao et.al, 2006, & Peters et.al, 2009). If knowledge is supported by enabling and reinforcing factors, desirable changes may occur in the school setting and in the community. Although the need for

sanitation is widely known, reality does not reflect this perception. The gap between knowledge and practice is a common barrier to achieving health outcomes (UNICEF & WHO 2012, UNESCO 2003 & Rodrigo & Aranceta 2003). A substantial body of evidence supports the effectiveness of school-based education and interventions on the development of the knowledge, attitudes, values and skills that are required to make the most appropriate and positive health-related decisions. School-based awareness programme is recommended for addressing priority health, hygiene and nutrition problems of school children and adolescents through the development of knowledge, attitudes and skills for promoting healthy behavior and lifestyle (UNESCO 2000 & Rao et.al, 2006). Knowing the importance of awareness and education in this area need assessment survey was planned to know the present knowledge of adolescents and need of education and training in this area so LSE can be planned for adolescents. In carrying out this study, questionnaire was administered to respondents (students) in their various schools to collect relevant data. The data collected from the respondents were analyzed, interpreted and presented below.

Table 1.1: Association between demographic variables and Personal, environmental and food related cleanliness

Variables		**Poor f (%)**	**Average f (%)**	**Good f (%)**	**Chi^2**	**p-value**
Total Respondents	N=4230 (100)	1,392 (32.9)	1,576 (37.25)	1,262 (29.83)		
Block	Gadarpur	194 (27.3)	262 (36.8)	255 (35.9)	102.05	**0.001 (S)**
	Jaspur	281 (39.7)	265 (37.5)	161 (22.7)		
	Kashipur	198 (27.4)	268 (37.1)	256 (35.5)		
	Kichha	267 (37.7)	261 (37.0)	179 (25.3)		
	Rudrapur	181 (26.5)	249 (36.5)	253 (37.0)		
	Sitarganj	271 (38.7)	271 (38.7)	158 (22.6)		
Class	7th	245 (35.4)	281 (40.6)	166 (24.0)	98.4	**0.001 (S)**
	8th	239 (36.2)	251 (38.0)	170 (25.8)		
	9th	299 (38.3)	274 (35.2)	207 (26.5)		
	10th	228 (33.0)	266 (38.4)	198 (28.6)		
	11th	234 (33.3)	246 (35.0)	223 (31.7)		
	12th	147 (20.9)	258 (36.7)	298 (42.4)		
	Female	417	831	911	475.2	**0.001 (S)**

Gender		(19.3)	(38.5)	(42.2)		
	Male	975 (47.0)	745 (36.0)	351 (17.0)		
Age	Less than or equal to14 years	758 (35.0)	792 (36.6)	616 (28.4)	9.34	**0.009 (S)**
	Greater than 14 years	634 (30.7)	784 (38.0)	646 (31.3)		
Income	Less than 1500	289 (37.8)	274 (36.0)	200 (26.2)	61.2	**0.001 (S)**
	1501-3000	366 (40.1)	315 (34.5)	232 (25.4)		
	3001 to 8000	339 (33.6)	384 (38.1)	285 (28.3)		
	More than 8001	234 (25.3)	350 (37.9)	340 (36.8)		
Religion	Hindu	756 (31.6)	847 (35.4)	787 (33.0)	41.7	**0.001 (S)**
	Muslim	634 (35.1)	706 (39.1)	467 (25.8)		
	Punjabi	2 (6.1)	23 (69.7)	8 (24.2)		
Fathers Education	Graduation	19 (29.7)	29 (45.3)	16 (25.0)	63.4	**0.001 (S)**
	ITI	1 (33.3)	2 (66.7)	0 (0.0)		
	MBA	0 (0.0)	0 (0.0)	4 (100.0)		
	Master	8 (17.0)	14 (29.8)	25 (53.2)		
	Primary	246 (35.1)	198 (28.2)	257 (36.7)		
	Six to Intermediate	452 (30.6)	575 (39.0)	448 (30.4)		
	Uneducated	516 (41.7)	386 (31.2)	334 (27.1)		
Mothers Education	BA	20 (22.73)	28 (31.82)	40 (45.45)	10.9	0.09 (NS)
	Primary	155 (35.6)	147 (33.7)	134 (30.7)		
	Uneducated	829 (40.1)	622 (30.1)	614 (32.2)		
	Six to Intermediate	298 (34.6)	308 (35.73)	256 (29.69)		
Type of Family	Joint	361 (34.5)	399 (38.1)	286 (27.4)	4.2	0.11 (NS)
	Single/Nuclear	1031	1177	976		

		(32.4)	(37.0)	(30.6)		
Fathers Occupation	Business	158 (33.5)	190 (40.2)	124 (26.3)	42.3	**0.001 (S)**
	Farmer	179 (31.8)	230 (41.0)	153 (27.2)		
	Labour	854 (31.8)	978 (36.4)	852 (31.8)		
	Service	98 (22.3)	157 (35.8)	184 (41.9)		
	Unemployed	35 (48.0)	21 (28.7)	17 (23.3)		
Mothers Occupation	Business	2 (22.22)	4 (44.44)	3 (33.33)	45.2	**0.001 (S)**
	Farmer	10 (33.33)	6 (20.0)	14 (47.67)		
	Housewife	1252 (33.1)	1436 (38.0)	1093 (28.9)		
	Labour	164 (40.59)	120 (29.70)	120 (29.70)		
	Service	2 (33.3)	2 (33.3)	2 (33.4)		

The data furnished in the table 4.4 reflects association between demographic variables and knowledge of personal, environmental and food related cleanliness/ hygiene and sanitation. A total of 4,230 students studying in 7 to 12 standard were studied of whom 2,159 were girls and 2,071 respondents were boys. In the present study it was found that approximately one third of studied respondents had poor knowledge regarding personal, environmental and food related cleanliness whereas others had good to average level of knowledge regarding the present topic. It was found that girls had more knowledge regarding personal, environmental and food related cleanliness compared to boys.

While reviewing the available literature on the present topic it is evident that study conducted by other researchers also correlates with present study. The study conducted by Redmond & Griffith 2003; Sanlier 2009; Tomaszewska et al. 2018 found that most of the subjects indicate inadequate knowledge and practice about food safety and health and hygiene. In this study, the knowledge and practice of the adolescents were studied both in total and regarding three areas include 1) Personal and Environmental Food Hygiene (PEH), 2) Food Preparation and Preservation (FPP), and 3) Food Consumption (FC). Accordingly, the results of the study showed that the level of adolescents' knowledge in two areas of FPP and PEH was better than of FC. The food consumption practice was also weaker in two other areas. Findings of other studies indicated that food consumers had poor knowledge and practice in relation to food safety.

The data revealed that maximum percentage of respondents from Rudrapur (37.0%) and Gadarpur (35.9%) had good personal, environmental and food related hygiene knowledge whereas the maximum percentage of respondents from Jaspur (39.7%) and Sitarganj (38.7%) was found to have poor level of knowledge. The difference was found to be highly significant ($p<0.001$).

The respondents studying in higher classes 12th (42.4%) and 11th (31.7%) were found to have good knowledge about hygiene and sanitation compared to respondents studying in lower grades such as class 7th (35.4%) 8th (36.2%) and 9th (38.3%). They were found to have poor knowledge level. The difference was found to be statistically significant. So it is evident from the study that level of knowledge increases with age.

The females (80.7%) were found to be more aware about hygiene and sanitation in total in comparison to males (53.0%). The difference was found to be highly significant ($p<0.001$). Similar trend was observed age-wise. The respondents who were above 14 years (69.3%) were found to be more aware in comparison to those whose age was less than 14 years (65.0%). Statistically, the result was found to be significant. So it can be concluded from the above study that females were more aware about maintaining personal, environmental, and food related hygiene and cleanliness compared to boys.

It is very overwhelming to note that 36.8 percent of respondents who had family income more than 8000 were found to be more aware about personal, environmental and food related cleanliness in comparison those with lower family income. The results were statistically significant. So we can say that families, were overall family income is good maintain good hygiene and sanitation practices compared to the families living with low family income. And the reason of good family income was involvement of both parents in the work force. The reason of their involvement in work force is their educational status. So hear it can be seen that directly or indirectly education and knowledge is responsible for maintaining good hygiene and sanitation practices among individuals.

As far as religion is concerned majority of the Punjabi respondents (93.9%) were found to be more aware about hygiene and sanitation followed by Hindu (68.4%) and Muslim respondents (64.9%). The results were found to be statistically significant.

All the respondents (100%) whose fathers have done MBA were found to have good personal, environmental and food related cleanliness knowledge followed by those respondents (53.2%) whose fathers have done post-graduation. The maximum percentage of respondents (35.1%) whose fathers were uneducated (41.7%) and educated upto primary reflected poor knowledge level. The result was found to be statistically significant at 0.001 level of significance. Maximum percentage of respondents (45.45%) whose mothers were educated upto graduation had better knowledge level compared to respondents of uneducated mothers (32.2%). Statically, also no significant difference was observed.

In type of family, respondents belonging to nuclear family (30.6%) were found to have better knowledge in comparison to those who live in joint family (27.4%). However, no statistical difference was found.

About 48.0 percent of respondents whose fathers were unemployed were found to have poor knowledge, followed by respondents whose fathers worked as labour (31.8%) and farmer (31.8%). However, among respondents whose mothers were labour (40.59%) had poor knowledge about hygiene and sanitation, followed by mothers working as farmer (33.33%) and service class (33.4%). The maximum percentage of respondents (41.9%) whose fathers were service class had good personal, environmental and food related cleanliness knowledge followed by respondents whose fathers were worked as labour (33.5%). Maximum percentage of respondents whose mothers were involved in service (33.33) and business (33.33%) had good knowledge about hygiene and sanitation.

When we correlate the present research findings with the similar research studies it was found that socioeconomic factors seem to play a crucial role in the knowledge and practices of adolescents in the field of food safety and hygiene. The results of the study conducted by Unusan 2005; Tomaszewska 2018; Jianu & Chiş 2012; Avarand & Abedi-Sarvestani 2015;

Sharifirad & Hidarnia 2001, represents that adolescents' knowledge regarding food safety was significantly affected by their educational status (Studying or have graduated), parents' educational level, parents' job status and household economic conditions. So that, the results indicated the higher knowledge of adolescents with higher educated parents and graduated adolescents. Additionally, adolescents with employed parents and also adolescents with good household economic status significantly had more knowledge about food safety and hygiene. This study finding correlates with the findings of the present study. However, the role of socioeconomic factors was more limited in adolescents practice in relation to food safety and hygiene. So that, only the mother's job status and family economic status had a significant effect on the practice. Accordingly, the well-being of the family and stay-at-home mothers had a positive and significant influence on the practice of the adolescents in relation to food safety and hygiene. Therefore, in several studies, the effect of socioeconomic factors on the knowledge and practice of adolescents in relation to food safety has been reported. Generally, it can be said that the higher education level of adolescents and their parents has a positive effect on food safety-related knowledge (Jianu & Chiş 2012; Avarand & Abedi-Sarvestani 2015; Sharifirad & Hidarnia 2001), although it does not guarantee a proper practice (Ansari-Lari et al. 2010). However, the job statuses of the parents and the household's economic situation have a positive impact on the knowledge as well as improving the practice of adolescents in relation to food safety (Avarand & Abedi-Sarvestani 2015).

Thus, the data pertaining to knowledge about personal, environmental and food related hygiene reveals that locale, class, gender, age, family income, religion, father's education, occupation and mother's occupation has significant association with the personal hygiene knowledge level of an individual. However, mother education and type of family was found to have no association with hygiene and sanitation knowledge level.

Conclusion

In summary, the results of this study indicated the inadequate knowledge and practices of adolescents in relation to personal, environmental and food related hygiene and cleanliness. It was found that approximately one third of studied respondents had poor knowledge regarding personal, environmental and food related cleanliness whereas others had good to average level of knowledge regarding the present topic. The respondents studying in higher classes (12^{th}, 11^{th}, 10^{th}) and whose ages were more than 14 years were found to have good knowledge about hygiene and sanitation compared to respondents studying in lower grades (7^{th}, 8^{th}, 9th). The females were found to be more aware about hygiene and sanitation in comparison to males. Respondents who had family income more than 8000 were found to be more aware about personal, environmental and food related cleanliness in comparison to those with lower family income. Respondents of educated parents had good personal, environmental and food related cleanliness knowledge compared to uneducated or less educated respondents. Respondents from nuclear family were found to have better knowledge in comparison to those who live in joint family. Respondents whose fathers and mothers were unemployed or worked as laborers were found to have poor knowledge regarding persona, environmental and food related cleanliness compared to respondents of educated parents. Locale, class, gender, age, family income, religion, father education, occupation and mother occupation has significant association with the personal hygiene knowledge level of an individual. However, mother education and type of family was found to have no association with hygiene and sanitation knowledge level. At last we can conclude that inadequacy of knowledge and performance of adolescents about personal,

environmental and food related hygiene and cleanliness show the need for implementation of health education interventions through life skill education in schools in this area.

References

Ansari-Lari, M., Soodbakhsh, S. and Lakzadeh, L. 2010. Knowledge, attitudes and practices of workers on food hygienic practices in meat processing plants in Fars, Iran. Food control. 21(3):260–3. https://doi.org/10.1016/j.foodcont.2009.06.003.

Avarand, A. and Abedi-Sarvestani, A. 2015. Analysis of knowledge and attitude towards food safety among university students in Gorgan city. *Journal of Food Hygiene.* 17(5):53–66.

Curtis VA, Danquah LO, Aunger RV, 2009. Planned, motivated and habitual hygiene behaviour: an eleven country review. *Health Educ Res*. 4:655–673. [PubMed: 19286894]

Jianu, C. and Chiş, C. 2012. Study on the hygiene knowledge of food handlers working in small and medium-sized companies in western Romania. *Food Control*. 26(1):151–6. https://doi.org/10.1016/j.foodcont.2012.01.023.

Keshav Swarnkar, (2008): *Community Health Nursing*, NR Brothers, Indore.

Peters L, Kok G, Ten Dam G. 2009, Effective elements of school health promotion across behavioral domains: a systematic review of reviews. *BMC Public Health*.12(9):182–196. [PMC free article] [PubMed] [Google Scholar]

Rasool Hassan BA 2012, Importance of Personal Hygiene. *Pharmaceut Anal Acta* 3:e126. doi:10.4172/2153-2435.1000e126.

Rao G, Rao D, Venkaiah K, Dube A, Sarma K. 2006, Evaluation of the Food and Agriculture Organization's global school-based nutrition education initiative, Feeding Minds, Fighting Hunger (FMFH), in schools of Hyderabad. *India Public Health Nutrition.* 9(8):991–995. [PubMed] [Google Scholar]

Rodrigo C, Aranceta J. 2003, Nutrition education in schools: experiences and challenges. *European Journal of Clinical Nutrition.* 57(1):S82–S85. [PubMed] [Google Scholar]

Sharifirad, G.H. and Hidarnia, A. 2001. Effect of health education in the decrease of intestinal parasitic infection in Ilam using Perry model. *Journal of Shaeed Sdoughi University of Medical Sciences Yazd.* 9(4):75–80.

Tomaszewska, M., Trafialek, J., Suebpongsang, P. and Kolanowski, W. 2018. Food hygiene knowledge and practice of consumers in Poland and in Thailand-A survey. *FoodControl.* 85:76-84. https://doi.org/10.1016/j.foodcont.2017.09.022.

Unusan, N. 2005, Consumer food safety knowledge and practices in the home in Turkey. *Food control.* 8(1):45–51. https://doi.org/10.1016/j.foodcont.2005.08.006.

UNESCO/UNICEF/WHO/The World Bank, author. World Education Forum 2000, Final Report. Dakar, Senegal: 2000. Focusing Resources on Effective School Health: A FRESH start to enhancing the quality and equity of education. [Google Scholar]

United Nations Children's Fund (UNICEF), author Child Friendly Schools Manual: Water, Sanitation and Hygiene (WASH) in Schools. Geneva, Switherland: 2012. [Google Scholar]

UNFPA 2014. The Power of 1.8 Billion: Adolescents, Youth and the Transformation of the Future.

World Health Organization (2009). Hand-washing could save the lives of millions of children. [Accessed August 5, 2009]. Available at:http://www.scielosp.org/scielo.php?lng=en.

World Health Organization, author. Global costs and benefits of drinking-water supply and sanitation interventions to reach the MDG target and universal coverage. Geneva, Switzerland: 2012. [Google Scholar]

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An assessment of knowledge, attitude and menstrual hygiene practices among adolescent girls of Kichha block, Udham Singh Nagar

ALKA PANDEY*[1] AND RITA SINGH RAGHUVANSHI[2]
[1]Post-Doctoral Fellow and [2]Dean & Professor
[1]Department of Human Development and Family Studies, College of Home Science, G.B.Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India
[2]Department of Food and Nutrition, College of Home Science, G.B.Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

ABSTRACT

The topic of menstrual hygiene is inadequately acknowledged and has not received proper attention in our country though it is one of the most basic characteristic features of women. Use of sanitary pads and washing the genital area are essential practices to maintain the menstrual hygiene. Unhygienic menstrual practices can affect the health of the girls and there is an increased vulnerability to reproductive tract infections and pelvic inflammatory diseases and other complications. The current paper attempts to study the menstrual knowledge, attitude and practice level of 357 adolescent girls of 13-18 years lives in Kichha block of Udham Singh Nagar. A pre-designed, pretested and self-structured questionnaire was used for this purpose. Results of the study indicate the common practices followed by these young girls and the societal restrictions placed upon them during this period. It was also found that there is an urgent need to provide appropriate information to young girls regarding the process of menstruation and basic hygiene practices to be adopted to avoid genital problems.

Key Words : Menstruation, Customs, Practices, Restrictions

INTRODUCTION

Menstruation is a phenomenon unique to the females (WHO, 2003). The onset of menstruation is one of the most important changes occurring among the girls during the adolescent years. The first menstruation (menarche) occurs between 11 and 15 years with a mean of 13 years (Banerjee *et al.*, 2007).

Adolescent girls constitute a vulnerable group, particularly in India where female child is neglected one. Menstruation is still regarded as something unclean or dirty in Indian society. The reaction to menstruation depends upon awareness and knowledge about the subject. The manner in which a girl learns about menstruation and its associated changes may have an impact on her response to the event of menarche. Although menstruation is a natural process, it is linked with several misconceptions and practices, which sometimes result into adverse health outcomes.

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Adolescent menstrual hygiene and self-care is a critical issue that determines the health status of the adolescent and the eventual practices that are inculcated into adult life (Uzochukwu *et al.*, 2009). Poor hygiene and inadequate self-care practices are major determinants of morbidity and other complications among this age group (McCaleb and Cull, 2000). However, it is interesting to see how some girls develop their own strategies to cope.

Women having better knowledge regarding menstrual hygiene and safe practices are less vulnerable to RTI and its consequences. Therefore, increased knowledge about menstruation right from childhood may escalate safe practices and may help in mitigating the suffering of millions of women.

Objectives :

This study was undertaken with the following objectives:

– To know the beliefs, conception and source of information regarding menstruation among the study population.

– To find out the status of menstrual hygiene among adolescent girls of Kichha block of Udham Singh Nagar.

– To assess the restrictions practiced by rural Indian girls during menstruation.

METHODOLOGY

Local of the study and selection of sample :

The study was conducted in Kichha block of Udham Singh Nagar, Uttrakhand India. Respondents belonged to 13-18 years were the study population. From each class 59 adolescent girls studying in 7 to 12 standard were selected as a sample of my study. Total 357 adolescent girls were selected for the present study.

Study Design, Tools and Techniques :

The research was carried out from 26 Oct. 2016 to 25 Oct. 2017. A pre-designed, pretested and self -structured questionnaire was prepared and used for the collection of data. Schools for the study purpose were selected randomly from each block but students from each class were selected purposively for data collection. Only those respondents who were willing to fill the questionnaire were included for the study purpose.

Procedure :

The purpose and the nature of the study were explained to the respondents. Questionnaire which were used for the study included topics related to the awareness about menstruation, the sources of information regarding menstruation, the hygienic practices during menstruation and the restricted activities practiced during menstruation. The chronological age and the age at menarche were also elucidated under general information. The menstrual hygiene questionnaire included queries about the type of absorbent which was used, its storage place, the use of clean or unclean napkins and the frequencies of changing and cleaning them. The information about personal hygiene included washing and bathing during menses, the practice of wearing stained clothes, etc.

Data analysis :

Quantitative data from the survey was analysed using proportions through Windows Microsoft

Excel software. Frequency and percentages were calculated for data analysis.

Ethical consideration :

Rights, anonymity and confidentiality of the respondents were respected at all the stages of study. Informed verbal consent was taken from the respondents before collecting data. Through verbal consent process, the type and purpose of the survey; issues of anonymity and confidentiality; voluntary participation and freedom to discontinue to fill the questionnaire at any stage; and absence of any known risk or benefit for participating in the study was explained beforehand. To preserve anonymity, all findings are presented without ascribing names or identifiable personal description. All participants were informed, that their participation is voluntary and that the collected data would be only used for the purpose of the study as well as for their benefit.

Limitations of the study :

– The respondents were selected purposively. Only those respondents who were willing to fill the questionnaire were selected for the study.

– Findings of this study cannot be generalized to all the blocks of Udham Singh Nagar, until separate study will not be conducted for the different blocks and the data will not be co-related among blocks.

– The survey questionnaires though made in Hindi contained some technical terms; many respondents had difficulty in understanding parts of it. The researcher acted as translator by explaining the terms to them.

RESULTS AND DISCUSSION

The data in Table 1 indicates that only 28.5 per cent participants were aware about menstruation before reaching menarche, majority of the girls were not even aware of the process of menstruation prior to beginning with menarche while in a study conducted among school going adolescent girls in Nagpur reported that 36.9% of their subjects knew about menstruation before attaining menarche (Thakre *et al.*, 2011). Studies conducted with adolescent girls in Tanzania, Kenya, Ghana, Uganda and Zimbabwe have all found confusion over the menstrual cycle, menstrual patterns, and an absence of pragmatic menstrual-related guidance provided to girls pre- and sometimes even post menarche (McMaster *et al.*, 2009; Sommer, 2009; Fehr, 2011; McMahon *et al.*, 2011; Crofts and Fisher, 2012; Sommer and Ackatia-Armah, 2012). A series of articles from India also indicated insufficient knowledge about menstruation among girls, particularly pre-menarche (Gupta and Vatsayan 1996; Dhingra *et al.*, 2007; Nemade *et al.*, 2009).

The most important sources of providing the information related to menarche were mothers, sisters too played an important role here along with friends and teachers. As reported by the girls since menstruation is a 'hush-hush' topic in the families, they normally don't come to know, until beginning with their first period. Mothers have always been identified as an important source of providing information on menstruation for the girls, as also shown by some other studies to a varying degree (Dasgupta and Sarkar, 2008; El-Gilany *et al.*, 2005). The rising literacy levels, increasing awareness amongst women along with decreasing inhibitions in talking to their daughters have been understood as the reason for disseminating information. Other sources of information regarding menarche were sisters, friends and teachers for the girls. These findings were consistent with those of other studies (Khanna *et al.*, 2005; Mudey *et al.*, 2010; Dasgupta and Sarkar, 2008).

Table 1 : Information about menarche and perception related to menstruation amongst rural girl (n=357)
Information about menarche

Information about menarche	No. (%)
Awareness about menstruation before menarche	
Yes	102(28.5)
No	255(71.4)
Source of information before menarche	
Mother	175(49.04)
Sister	78(21.84)
Friend	41(11.48)
Teachers	22(6.16)
Others	41(11.48)
What is the cause of menstruation?	
Don't Know	189(52)
Physiological	69(19.32)
Curse of god	99(27.73)
What absorbent should ideally be used during menstruation?	
Sanitary pad	184(51.54)
Cloth	101(28.29)
Other	72(20.16)

Since, mothers are the closest and safe modes imparting knowledge about the process, the mothers consider it as their responsibility to impart knowledge about menstruation to their girls. Some of the girls, who have attained menarche before others, become a source of information to others, while sources like television, books, and magazines too have become sources of gaining information. Teachers as reported by the girls were hardly a source of information to them, for they did not feel comfortable talking to the girls, in many cases the syllabus portion comprising of information related to female anatomy were skipped or left for self- study.

Study also revealed that 71.4 per cent study subjects were not aware of the reason behind occurrence of menstruation. 27.73 per cent believed that menstruation is a curse of God. Only 12 per cent of the girls were aware of uterus being the source of blood flowing during the menstrual cycle while a majority of girls *i.e.* 55.33 per cent were not of the same. Dasgupta and Sarkar (2008) in their study found that majority of the girls did not know about the cause of menstruation while 29(19.33) believed it to be a physiological process, whereas referring to previous done researches in a similar study, 86.25% believed it to be a physiological process. In a similar study carried out in Rajasthan by Khanna *et al.* (2005) nearly 70 per cent believed that menstruation was not natural process. It is surprising that majority of the girls even did not know the sources of menstrual bleeding.

51.54 per cent of girls reported that sanitary pads should ideally be used during the menstruation. But only 28.01 per cent actually use it during menstruation. Practice of menstrual hygiene amongst the rural girls in Table 2 reveals that while 62.46 per cent girls used old cloths and 9.08 per cent used new cloth during menstruation. According to the Baridalyne and Reddaiah study which they conducted in 2004, 61(40.67) girls felt that ideally old cloth should be used during menstruation, in the study by, only one-third of the study subjects used sanitary pads as absorbents. The easy availability of cloth and the high cost of sanitary napkins becomes a reason for preferring cloth over

Table 2 : Practise of menstrual hygiene amongst the rural girls (n=357)

Menstrual hygiene practices	No. (%)
Use of material during menstruation	
Sanitary pad	100(28.01)
Old cloth	223(62.46)
New cloth	35(9.80)
Material used for cleaning of External genitalia	
Only water	210(58.82)
Soap and Water	142(39.77)
Water and antiseptic	5(1.40)
Storage of absorbent	
Bathroom	172(48.17)
Don't store	110(30.81)
Store with routine cloth	60(16.80)
Others	15(4.20)
Method of disposal	
Burn it	200(56.02)
Throw it in routine waste	58(16.24)
Others (Don't dispose/Flush/Hide)	99(27.73)
Places of drying	
Outside house in the sunlight	182(50.98)
Inside house	139(38.93)
outside house without sunlight	36(10.08)
Change of pad in school	
Yes	56(15.68)
No	301(84.31)
Toilet facility at home	
Yes	316(88.51)
No	18(11.49)

sanitary pads. The type of absorbent material which is used is of primary concern, since reuse of the material could be a cause for infection if it is improperly cleaned and poorly stored (E.L. Gilany *et al*., 2005). Despite of the uneasiness being felt due to use of cloth, it still remains the preferred means for them, due to its easy availability and low cost, while feeling ashamed in purchasing sanitary napkins, their high cost and low availability in the area leads to less use of sanitary napkins.

Present study reveals that only 1.90 per cent girls used water and antiseptic for cleaning the external genitalia, while a majority of girls (48.17%) used only water, a figure that is higher than the 45% reported by Drakshayani and Venkata (1994), from a study among rural adolescent girls of Andhra Pradesh. As indicated by the results, the majority of them used only water to wash their genital area, not knowing the importance of maintaining cleanliness in the genital area, which would further help them avoid various genital related problems. Very few used water and antiseptic to wash the genital areas, thus making them safe against various problems related to female genitals, since antiseptic helps in killing germs and bacteria while also preventing their growth.

It is also important that the place where the absorbent material is stored in clean and hygienic. In the present study it was also found that the girls disposed the used absorbents by carefully

wrapping them in sheets of papers and polythene and then mostly burning it with other household waste. Similar findings were reported in the study done by Omidwar and Begum (2010); Mudey *et al*. (2010); and Dasgupta and Sarkar (2008). In contrast to high-income urban areas where modern disposable menstrual hygiene products are proliferating and increasingly disposed of through centralized solid waste management systems (Ashley *et al.,* 2005), in low-income areas there were found to be a range of options used for disposing of menstrual materials in the home. These included burning, burying, throwing in the waste bin, pit latrine or flushing. Inadequate disposal systems and relevant menstrual disposal knowledge resulted in clogged toilets and pollution of streams with used materials. In a study it was also found that 43% of girls bury their used materials, 35% throw the used materials with other waste, and 19% burn the materials (Water Aid, 2009), which at times causes problems like clogging of toilet and polluting the local environment like streams in villages.

Survey data also reported that Majority of the girls stored the absorbents in the bathroom which is similar to another study where the proportion of the participants who used the bathroom as a storage place was as high as 49.8% (Narayan *et al.*, 2001). 16.24 per cents stored it with routine cloth. 30.87 don't store cloths for menstruation. Method of disposal adopted by girls were also differ, 56 per cent girls burnt the menstrual material while 27.73 per cent don't dispose/ flush /hide the material.

Some girls who reused the cloth used during menstruation dried them either inside the house or outside in the sunlight. Majority of the girls dried the cloth outside in the sunlight 50.98 per cent, while 38.93 per cent dried it inside the house, still 10.08 per cent were found to be drying the outside but without sunlight. Though majority of girls were found to be drying their absorbent material, cloth in this case, outside in the sun, it was also found that the rest of them did not dry the cloth in the sunlight, thus giving birth to various germs leading to problems experienced by them in the genital area, like itching, rashes, abrasions, urinary tract infections, as reported by the girls. In a study by Subhash *et al.* (2011), it was found that in cases of reused cloth, the places of its drying which were observed, was outside the house in sunlight in 51.32 per cent subjects, 47.37 per cent dried them inside the house, and, 4.94 per cent subjects dried them outside without sunlight.

In the present study, a very small proportion of the girls changed the pads at school hours. Surprisingly it was found that 84.31 per cent did not change the pad in the school, interestingly 88.51 per cent has toilets in their home. Other researchers too reported that 20.6% of the girls changed the pads at school hours (Omidwar and Begum, 2010). The probable reason for the girls not changing the pads could be ignorance and lack of facilities. The girls also reported that in many the schools they did not have separate toilet facilities for girls and the washrooms meant for teachers were not open to the girls for they would make them 'dirty'.

Table 3 shows a detailed representation of the various kinds of restrictions placed on the girls during menstruation. These are followed in the same way as have been practised by their mothers or other elderly female in the family, due to their ignorance and false perceptions about menstruation. The girls reported being unable to understand the reason for such discrimination and restrictions, practiced and followed without any valid reasons, yet not having the courage to disobey their elders. 83.47 per cent of the girls practiced these restrictions only 16.53 per cent of girls among the total studied group did not practice any restriction during menstruation. Majority girls 81.51 did not attend any religious function, 61.62. Per cent girls were not allowed to touch stored food and 58.82 per cent were allowed to attend school. Garg *et al.* (2001), reported that the vast majority of girls in a Delhi slum continue to experience restrictions on cooking, work activities, sexual intercourse,

bathing and religious practice during menstruation. The overall perception is that menstrual fluid is dirty and polluting, which occasions much secrecy around its management. In contrast, Dhingra *et al.* (2009), describe menstrual taboos among the Gujjar tribe of the Kashmir and Sammu regions of India, who lead a semi-nomadic existence. Their research with adolescent girls found there were restrictions on bodily washing and a taboo against burying a bloodied menstrual cloth. Cloths could only be washed and then buried or reused. Most girls reported washing the cloths secretly and drying them in a hidden corner, not in the sun, lest they be seen by others. Restrictions symbolize a woman's ritually dangerous status (Narayan *et al.*, 2001) that, as fuelled by myths, misconceptions, superstitions and taboos, is believed to have the potential to spoil food, plant, biological and social processes.

Table 3 : Restrictions practiced during menstruation (* Multiple responses)

Restrictions	No. (%)
Restrictions not practiced	59(16.53)
Restrictions practiced for*	298(83.47)
Attend religious functions	291(81.51)
Household work	109(30.53)
Touch stored food	220(61.62)
Sleep on routine bed	101(28.29)
Touch family members	177(49.57)
Play outside	162(45.37)
Not allowed to go to school	210(58.82)

Recommendations :

– Present study highlights the need to provide accurate and adequate information about menstruation to young girls and its appropriate management.

– Formal as well as informal channels of communication need to be sensitized towards the issue while emphasis should be laid on deliverance of correct information.

– There is a strong need to address issues like the restrictions which are imposed on or practiced by the girls which have been followed through generations in ignorance.

– Appropriate information regarding use of sanitary napkins, cloth and their disposal should be provided to girls in premenstrual stage and later.

REFERENCES

Ashley, R., Blackwood, D., Souter, N., Hendry, S., Moir, J., Dunkerley, J., Davies, J., Butler, D., Cook, A., Conlin, J., Squibbs, M., Britton, A. and Goldie, P. (2005). Sustainable disposal of domestic sanitary waste. *J. Env. Engng.*, **131** (2) : 206–215.

Banerjee, I., Chakraborty, S., Bhattacharyya, N.G., Bandyopadhyay, S., Saiyed, H.N. and Mukherjee, D. (2007). Acohortstudyof correlation between body mass index and ageatmenarchein healthy Bengali girls. *J. Indian Med. Assoc.*, **105** : 75-8.

Baridalyne, N. and Reddaiah, V.P. (2004). Menstruation: Knowledge, beliefs and practices of women in the Reproductive Group residing in an Urban Resettlement colony of Delhi. *Health Popul. Perspect.*, **27** : 9-16.

Castaneda, X., Garcia, C. and Langer, A. (1996). Ethnography of fertility and menstruation in rural Mexico.

Soc. Sci. Med., **42**(1) :133-140.

Crofts, T. and Fisher, J. (2012). Menstrual hygiene in Ugandan schools : an investigation of low-cost sanitary pads. *J. Water Sanit. Hyg. Dev.*, **2**(1) :50–58.

Dasgupta, A. and Sarkar, M. (2008). Menstrual Hygiene : How Hygienic is the Adolescent Girl? *Indian J. Community Medicine*, **33**(2) : 77-80.

Dhingra, R., Kumar, A. and Kour, M. (2009). Knowledge and practices related to menstruation among tribal (Gujjar) adolescent girls. *Ethno-Med.*, **3**(1) : 43–48.

Dhingra, R., Manhas, S., Kohli, N. and Mushtaq, A. (2007). A comparative study of understanding of menstrual process among married women belonging to two ecological settings. *J. Hum. Ecol.*, **22**(3) : 261–266.

Drakshayani, Devi K., Venkata, Ramaiah P. (1994). A study on menstrualhy giene among rural adolescent girls. *Indian J. Med. Sci.*, **48** : 139-143.

E.L. Gilany, A., Badwi, K. and El. Fedawy, S. (2005). Menstrual hygiene among adolescent school girls in Mansoura, Egypt. *Reproductive Health Matters*, **13**(26) : 147-152.

Garg, S., Sharma, N. and Sahay, R. 2001. Socio-cultural Aspects of Menstruation in an Urban Slumin Delhi. Department of Community Medicine, Maulana Azad Medical College, NewDelhi.

Khanna, A., Goyal, R.S. and Bhaswar, R. (2005). Menstrual practices and reproductive problems : a study of adolescent girls in Rajasthan. *J. Health Management*, **7**:91-107.

McMahon, S., Winch, J., Caruso, B., Obure, A., Ogutu, E., Ochari, I. and Rheingans, R.D. (2011). The girl with her periodis the one to hang her head : reflections on menstrual management among school girls in rural Kenya. *BMC Int. Health Hum. Rights*, **11**(7) : 1–10.

McMaster, J., Cornnie, K. and Pitts, M. (2009). Menstrual and premenstrual experiences of women in a developing country. *Health Care Women Int.*, **18**(6) : 533–541.

Mudey, A.B., Keshwani, N., Mudey, G.A. and Goyal, R.C. (2010). A cross-sectional study on the awareness regarding safe and hygienic practices amongst school going adolescent girls in the rural areas of Wardha district. *Global J. Health Sci.*, **2**(2) : 225-231

Narayan, K.A., Srinivasa, D.K. Pelto, P.J. and Veeramal, S. (2001). Puberty rituals, reproductive knowledge and health of adolescent school girls in South. *Azia Pacific Population J.*, **16**(2):225-238.

Nemade, D., Anjenaya, S. and Gujar, R. (2009). Impact of health education on knowledge and practices about menstruation among adolescent school girls of Kalamboli, Navi-Mumbai. *Health Popul. Perspect. Issues*, **32**(4) : 167–175.

Omidwar, S. and Begum, K. (2010). Factors which influence the hygienic practices during menses among girls from south India : A cross sectional study. *Internat. J. Collaborative Res. Internal Medicine & Public Health*, **2** : 411-423.

Sommer, M. and Ackatia-Armah, T. (2012). The gendered nature of schooling in Ghana : hurdles to girls' menstrual management in school. *JENDA*, **20** : 63–79.

Subhash, B., Thakre, Sushama, Thakre, S., Reddy, Monica, Rathi, Nidhi, Ketaki, Pathak and Ughade, Suresh (2011). Menstrual Hygiene : Knowledge and Practice among Adolescent School Girls of Saoner, Nagpur District. *J. Clinical & Diagnostic Res.*, **5**(5) 1027-10331027

Thakre, S.B., Thakre, S.S., Reddy, M., Rathi, N., Pathak, K. and Ughade, S. (2011). Menstrual Hygiene : Knowledge and practice among adolescent school girls of Saoner, Nagpur District. *J. Clin. Diagn. Res.*, **5** : 1027-1033.

Uzochukwu, U.A., Patricia, N.A. and Theophilus, O.N. (2009). The impact of pre-menarcheal training on menstrual practices and hygiene of Nigerian school girls. *Pan Afr. Med. J.*, 22:9.

Water Aid (2009). Is Menstrual Hygiene Management an Issue for School Girls?

World Health Organization. Adolescents in India. A Profile (2003). Available at http://www.whoindia.org/LinkFiles/Adolescent_Health_and_Development_(AHD)_UNFPA_Country_Report

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Steps in establishing reliability and validity of need assessment questionnaire on life skill training for adolescents

ALKA PANDEY*[1] AND RITA SINGH RAGHUVANSHI[2]

[1]Post-Doctoral Fellow and [2]Professor & Dean

[1]Department of Human Development and Family Studies, College of Home Science, G.B.Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

[2]Department of Food and Nutrition, College of Home Science, G.B.Pant University of Agriculture and Technology, Pantnagar (Uttrakhand) India

ABSTRACT

In order to have confidence in the results of a study, one must be assured that the questionnaire consistently measures what it purports to measure when properly administered. In short, the questionnaire must be both valid and reliable. This research paper will comprehensively explore and describes the validity and reliability of a developed research instrument (with special reference to questionnaire) developed for assessing, need of life skill education for adolescents in government schools of Udham Singh Nagar. During pretesting, reliability and validity of the Developed instrument which was in the form of questionnaire, was determined and scale was found highly reliable and valid. Reliability of the instrument was determined by using test retest reliability and split half method. Reliability coefficient was obtained by correlating first and second time administered scores. The test was found highly reliable as the reliability coefficient of the instrument was r=0.96. For split half method the coefficient between the two sets of scores obtained by Spearman Brown formula was found to be highly significant as the reliability coefficient of the instrument was (r=0.87) at 0.01 level of probability indicating high internal consistency of the developed instrument. Content and face validity method was used for establishing the validity of the instrument and the instrument were found highly valid for use.

Key Words : Adolescents, Assessment questionnaire, Spearman formula

INTRODUCTION

Questionnaires are the most frequently used data collection method in educational and evaluation research. Questionnaires help to gather information on knowledge, attitudes, opinions, behaviors, facts, and other information. Radhakrishna *et al.* (2003) found that 64% researchers used questionnaires in agricultural, Extension education and allied subjects studies.

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They also found that a third of the studies reviewed did not report procedures for establishing validity (31%) or reliability (33%). Development of a valid and reliable questionnaire is a must to reduce measurement error. Groves (1987) defines measurement error as the "discrepancy between respondents' attributes and their survey responses".

Development of a valid and reliable questionnaire involves several steps taking considerable time. This paper describes the sequential steps followed in the development and testing of questionnaires for need assessment of adolescents for life skill education in schools.

Questionnaire formation:

This section describes the process which was used for developing and testing questionnaires on life skill training for adolescents and posits five sequential steps involved in developing and testing a questionnaire: research background, questionnaire conceptualization, format and data analysis, and establishing validity and reliability. Systematic development of questionnaires is a must to reduce many measurement errors. Following these five sequential steps was used for questionnaire development and testing to enhance data quality and utilization of research.

Fig. 1 illustrates the five sequential steps involved in questionnaire development and testing. Each step depends on fine tuning and testing of previous steps that must be completed before the next step. A brief description of each of the five steps follows Fig. 1.

Step 1- Collecting background information :

In this first step, the purpose, objectives, research questions, and hypothesis of the proposed research are to be established. Determining the audience, their background, especially their educational/readability levels, access, and the process used to select the respondents (sample vs. population) are also part of this step. Literatures was reviewed on life skill education for adolescents available on internet, books, newspapers, magazines, journals were studied to have thorough understanding of the problem.

Step 2 - Questionnaire conceptualization :

After developing a thorough understanding of the research, the next step was to generate statements/questions for the questionnaire from available literature. These statements should be based on the aim and objectives of our research. In this step, content (from literature/ theoretical framework) was transformed into statements/questions. In addition, a link among the objectives of the study and their translation into content was established. For example, while making questionnaire for checking adolescent knowledge and awareness about HIV AIDS, to understand their need for life skill education which is an important component of life skill education, the researcher must indicate what the questionnaire is measuring, that is, knowledge, attitudes, perceptions, opinions, recalling facts, behavior change, etc. Major variables (independent, dependent) should also identified and defined in this step.

Step 3 - Format and data analysis :

In this step, the focus was given on writing statements/questions, selection of appropriate

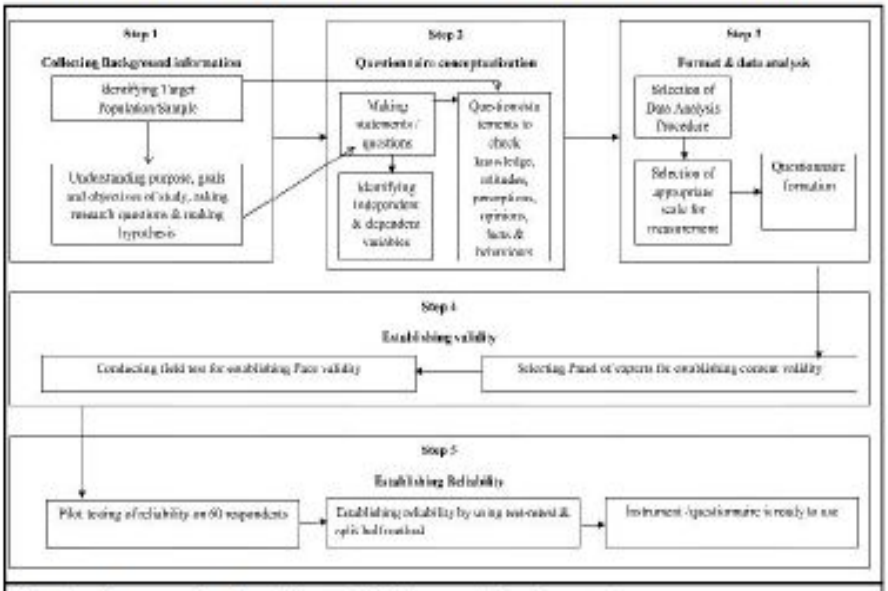
Step 1
Collecting Background Information
Identifying Target Population/Sample
Understanding purpose, goals and objectives of study, making research questions & making hypothesis
Step 2
Questionnaire conceptualization
Making statements / questions
Identifying independent & dependent variables
Questionnaire converts to check knowledge, attitudes, perceptions, opinions, facts & behaviours
Step 3
Format & data analysis
Selection of Data Analysis Procedure
Selection of appropriate scale for measurement
Questionnaire formation
Step 4
Establishing validity
Conducting field test for establishing Face validity
Selecting Panel of experts for establishing content validity
Step 5
Establishing Reliability
Pilot testing of reliability on 60 respondents
Establishing reliability by using test-retest & split half method
Instrument /questionnaire is ready to use

Fig. 1 : Sequence for Questionnaire/Instrument development

scales of measurement (ordinal, nominal, and ratio), format and layout of questionnaire, ordering of questions in questionnaire, font size, and proposed data analysis. Language of the questionnaire should be easily understandable by the study population. Scales are devices used to quantify a subject's response on a particular variable. Understanding the relationship between the level of measurement and the appropriateness of data analysis is important. For example, if ANOVA (analysis of variance) is one mode of data analysis, the independent variable must be measured on a nominal scale with two or more levels (yes, no, not sure), and the dependent variable must be measured on an interval/ratio scale (strongly agree to strongly disagree). Dummy table was to be prepared and statistical tools are finalized to ensure that all the data collected through questionnaire shall be subjected to analysis and inference drawing. Data analysis tool shall be such that all the objectives of research project can be concluded.

Step 4 - Establishing validity :

Validity refers to how well a test measures what it is purported to measure. Validity is the amount of systematic or built-in error in measurement (Norland, 1990). Validity was established using a panel of experts and a field test. As a result of Steps 1-3, a draft questionnaire was ready for establishing validity. Content and concurrent validity method was used for calculating the validity of developed research instrument. The following questions were addressed in Step 4 for establishing validity of the scale :

– Is the questionnaire valid? In other words, is the questionnaire measuring what it intended to measure?

– Does it represent the content?

– Is it appropriate for the sample/population?

– Is the questionnaire comprehensive enough to collect all the information needed to address the purpose and goals of the study?

– Does the instrument look like a questionnaire?

Content validity of the scale was obtained by seeking expert advice from 10 experts in the field of Human Development, Food and nutrition, extension education, Clothing and Textiles, Family Resource Management, Social work, Sociology and Psychology and the questionnaire was developed. Their suggestions were incorporated and the schedule was finalized.

The next step was to conduct a field test to establish face validity by using subjects not included in the sample. Make changes, as appropriate, based on both a field test and expert opinion. Now the questionnaire was ready to use.

Step 5 - Establishing reliability :

Reliability is the degree to which an assessment tool produces stable and consistent results. By establishing Reliability we can reduce the chances of random errors in measurement. According to Norland (1990) Reliability indicates the accuracy or precision of the measuring instrument. The pilot test seeks to answer the question; does the questionnaire consistently measure whatever it measures?

In this fifth and final step of establishing reliability of the questionnaire, pilot test was carried out on 60 respondents. Two types of procedures namely test-retest and split half methods were used to find out the reliability of the scale.

Test-retest method:

Test-retest reliability is a measure of reliability obtained by administering the same test twice over a period of time to a group of individuals. The scores from Time 1 and Time 2 can then be correlated in order to evaluate the test for stability over time (Colin and Julie, 2006).

The scale was administered twice to 60 respondents who were in the range of 13-20 age groups, outside the study area within 6 weeks interval. The calculated test retest reliability for the scale was r=0.96 indicating that the instrument is highly suitable for need assessment of adolescents on life skill training in schools as the scale was stable and dependable in its measurement.

Split half method:

It is another subtype of internal consistency reliability. The process of obtaining split-half reliability is begun by "splitting in half" all items of a test that are intended to probe the same area of knowledge in order to form two "sets" of items. The entire test is administered to a group of individuals, the total score for each "set" is computed, and finally the split-half reliability is obtained by determining the correlation between the two total "set" scores (Colin and Julie, 2006).

The scale which was administered to 60 respondents was divided into two levels based on odd and even number of statements and the coefficient of correlations between the two

sets of scores obtained by Spearman Brown formula was found to be highly significant (r=0.87) at 0.01 level of probability indicating high internal consistency of the developed scale. So we can say that the developed scale is highly suitable to check the need of life skill training for adolescents.

Conclusion :

Systematic development of the questionnaire or any research instrument for data collection is important to reduce measurement errors. Well-crafted conceptualization of the content and transformation of the content into questions is very important to minimize measurement error. Careful attention to detail and understanding of the process involved in developing a questionnaire are of immense value to researchers, students, and faculty alike. Not following appropriate and systematic procedures in questionnaire development, testing, and evaluation may undermine the quality and utilization of data (Esposito, 2002). Anyone involved in educational and evaluation research, must, establish reliability and validity of developed research instrument. Quality of research can be enhanced by following above discussed five steps. By determining reliability and validity of developed research instrument which was developed to assess need of life skill education of adolescents of Udham Singh Nagar studying in Government schools these above discussed procedures were followed and developed instrument which was in the form of questionnaire were found highly reliable and valid. So this developed instrument can be used not only in Udham Singh Nagar but any were in India by little bit of modification to check adolescents present knowledge on life skills and its importance to other places.

REFERENCES

Colin, Phelan and Julie, Wren (2005-06). Xploring reliability in academic assessment, UNI Office of Academic Assessment. https://chfasoa.uni.edu/reliabilityandvalidity.htm.

Esposito, J. L. (2002). *Interactive, multiple-method questionnaire evaluation research: A case study*. Paper presented at the International Conference in Questionnaire Development, Evaluation, and Testing (QDET) Methods. Charleston, SC.

Groves, R. M. (1987). Research on survey data quality. *Public Opinion Quarterly,* **51** : 156-172.

Norland-Tilburg, E.V. (1990). Controlling error in evaluation instruments. *J. Extn.*, [On-line], **28**(2). Available at *http://www.joe.org/joe/1990summer/tt2.html*

Radhakrishna, R.B. Francisco, C.L. and Baggett, C. D. (2003). An analysis of research designs used in agricultural and extension education. *Proceedings of the 30th National Agricultural Education Research Conference, 528-541.*

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Importance of life skills education in schools

Alka Pandey and Rita Singh Raghuvanshi
Department of Human Development and Family Studies, College of Home Science, G.B. Pant University of Agriculture and Technology, Pantnagar, U.S. NAGAR (UTTARAKHAND) INDIA

School is the platform for learning for the student. The main objectives of school are to build a productive generation in the future. The teacher focuses on the overall development of the students. Teacher builds reading writing and arithmetic skills among students. Apart from these skills it is the duty of the teacher as well as school setting to enable the students to face challenges in life. It is the generic life skills like self-awareness, empathy, effective communication, inter personal relationship, problem solving, decision making, creative and critical thinking, coping with stress and emotions that help the students to overcome challenges in real life. I visited many schools of Udham Singh nagar, collected the opinion of teachers as well as students regarding life skill education. I observed majority of the schools focus on development of arithmetic, writing and reading skills. They feel that improvement in marks of the students will increase their reputation. The teachers in the school are concentrated on training the students to score high in their respective subject. The transition in this focus of education created much impact in the life of student. They are not able to satisfy their psycho social needs, unable to communicate with others, inability to identify risk factors, unable to make good decisions and finally ended up in frequent failures and suicidal attempts. My post-doctoral research is on Life skill training programme for adolescence. Through this study I am going to describe the importance of life skill education in school setting. The main objective is to identify the relationship between principles and methods in teaching process and life skill education and to identify the gap in the implementation level of the process of teaching and learning in school setting. Before giving training on life skill observations were made and pilot study was conducted to know about teachers and students understanding on life skill education. Some teachers are aware about the relevance of life skill education in handling the issues faced by students but hesitate to apply this because of time constraint and lack of support from school and parents. Another section of teachers consider it as non-academic activity with less importance and unwilling to change from the approach of teacher centered classroom teaching to child centered. School authorities are worried about the disciple of school while engaging in participatory learning approach and due to excess consumption of time they cannot finish their syllabus on time will affect their result. We can conclude that before integrating life skill education we have to handle the perception of teachers and school authorities regarding the benefits of this type of teaching.

School is the temple of learning. Teachers are the facilitators of learning process. The teacher focuses on overall development of the students. The way of teaching the subjects will influence the student's behaviour. It is the duty of the teacher to build the character of a student. Gage defined teaching as a "form of interpersonal influence aimed at changing the behaviour potential of another person". The main objective of teaching are it helps the students to understand the realities and adjust in a better way, enable them to analyze the truth and take decisions, make the students a best worker and best thinker. When we relate this in the context of life skill education we can see a lot of similarities like life skills enables the individual to deal effectively with demands and challenges of everyday life, development of cognitive skills including problem solving, decision making, creative and critical thinking, and finally enabling behaviour modification of the individuals.

General principles in teaching and life skill education: Teaching process is based on some general principles like principle of motivation and interest in which the teaching should create interest in the mind of students. Interest can be created within the students through participatory learning approach. When the students apply what they learned in daily activities it satisfy the principle of activity. It persists in their mind for a long time and is much effective then note writing and passing the exam. The principle of creation and recreation says teaching should have recreational activities that impart creative thinking and innovations among students. Recognizing individual difference and identifying talents of each student is another principle of teaching. The teacher should analyze the intelligence, nature, ability, interest, potential, needs and concerns of students. The next principle details with enabling the student to set a goal in their life. In this the teacher should help the student to recognize his/her talents

and set directions to achieve the goal. The final principle of teaching says a teacher should relate everything to real life. Every subject should be linked to the reality. For example in science class if a teacher took class on health and nutrition the student should able to relate different dimensions of health and should analyze whether he/she is following healthy lifestyle. The principles emphasis on practice of things that is learned and thus develop a good productive citizens.

Now-a-days the implementation of these principles in teaching is minimal. The teachers are more focused on completing the syllabus. They teach reading, writing and arithmetic skills to students and consider it as overall development of the student. Here comes the relevance of life skill education through which we can implement all these principle effectively. The techniques in life skill education like activities, games, role play, debate, discussion etc. will make learning process interesting and the student automatically develop the motivation to study. Each content in life skill focus on learning by doing that improves the creativity of students. Life skill education helps the students to recognize their talents and abilities. The awareness about themselves help them to set goal in their life. Finally enhancement of these skills are useful to address the needs and concerns of their daily life. If a teacher who is well trained in life skill education will effectively implement the principles of teaching through life skill education.

Methods of teaching and life skill education : Methods of teaching play a vital role in learning process of the student. Method is the style of presentation of contents in the classroom. Methods can be classified under following three heads:

Telling – Lecture, Questioning, Discussion etc.

Showing – Demonstration, visual aids etc.

Doing – Project, Role play, Practical etc.

A teacher can use any of these methods or combination of these methods in their teaching. But the method of doing is not much projected in current teaching. The method of learning by doing can be implemented easily by life skill education.

Let us analyze what is the relevance of applying life skills in current teaching methods. UNICEF defines life skill based education as tool for behaviour modification. That is a behaviour development approach designed to address a balance of three areas: knowledge, attitude and skills. Knowledge can be provided through class room teaching but the attitude and skills can be produced only through practice. Let us analyze what are problems faced by students due to this lack of attitude and skills. And what are the areas that need behaviour modification for the student.

Problems among students : The student population faced a lot of problems in the school, family and society. The major problems are:

- Handling physical changes in the body.
- Academic achievement
- Choosing a career
- Handling peer pressure
- Interpersonal relationships issues
- Parental pressure
- Lack of protection from violence
- Inability of community to channelize their energy
- Lack of trust, recognition and respect
- Media influence
- High risk sexual behaviour
- Parental discord and disharmony
- Environmental factors like poor access to education and health services
- Vulnerabilities like poverty, single parenting,
- Drug abuse
- Child labour
- Adjustment issues
- Emotional instability
- Mental health issues etc.

All these needs and concerns are to be addressed. The next question is who authority to deal these issues is. Everyone who is relating to these issues is responsible to address these problems. It included the parents, teachers, peer group, community and the student himself. Since the student spend most of his time in school we can say teachers play a major role in providing support and directions to students to handle these problems. Before give support and directions the teacher should perceive this problem in an empathetic manner. Teacher should able to identify the root cause of the problem. For example if a student always come late to class a teacher should find out the reason behind it because sometimes the student is the bread winner of the family and he has to finish his work and come to school. The skill of empathy helps the teacher to understand the situation of latecomer of the class. If the teacher lacks this attitude he/she may punish the child sometimes dismiss him/her from the class forevermore. So to perceive the root cause of absenteeism the teacher needs the skill of empathy. If a student explores the insecurity that he faced at his home to the teacher, he can help the student by teaching the skills of problem solving, decision making, coping with stress and

Contd..... p. 123

अच्छी खबर पंतनगर विवि की पोस्ट डॉक्टरेट फेलो डॉ. अल्का पाण्डेय से असलम कोहरा की बातचीत

काउंसिलिंग से किशोरों की आशाओं को लग सकते हैं पर

उत्तरांचल दीप ब्यूरो

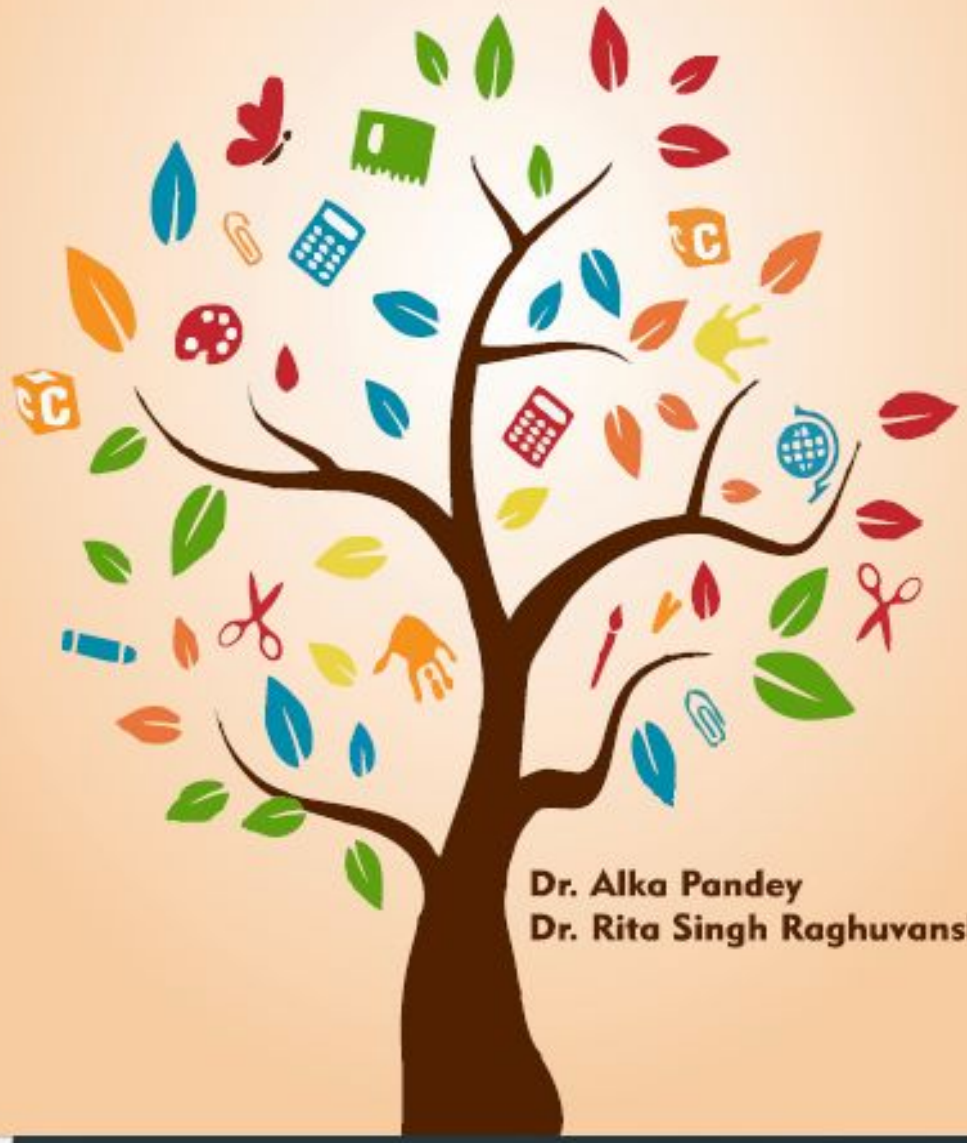
पोस्ट डॉक्टरेट फेलो डा. अल्का पांडेय।

पंतनगर। किशोरावस्था जीवन का बहुत ही महत्वपूर्ण चरण है, जिसमें बच्चा एक वयस्क के रूप में परिपक्व होता है। किशोरों के लिए बच्चे से वयस्क होने की यात्रा बहुत ही चुनौतीपूर्ण होती है जिसका सामना वे काउंसिलिंग के जरिये बखूबी कर सकते हैं। यह कहना है पंतनगर विवि के गृह विज्ञान महाविद्यालय के मावन विकास एवं पारिवारिक अध्ययन विभाग की पोस्ट डॉक्टरेट फैलो डॉ. अल्का पाण्डेय का। उत्तरांचल दीप के साथ खास बातचीत में डा. अल्का ने कहा कि किशोरावस्था में किशोर के मन में कई तरह की उथल-पुथल होती रहती है और कुछ कर गुजरने का जुनून भी। किन्तु अनुभव की कमी एवं उचित मार्गदर्शन के अभाव में उथल-पुथल वाला चित्त उन्हें उद्देश्य से भटका सकता है। जीवन के इस चरण में किशोरों में बहुत से शारीरिक व हार्मोनल परिवर्तन होते हैं जिसका सीधा-सीधा असर किशोर के मन पर पड़ता है। तरह-तरह के सवालों के समंदर मन में उभरते रहते हैं। लेकिन उचित मार्गदर्शन के अभाव के चलते किशोर मन के प्रश्नों की उत्कंठा को शांत नहीं कर पाता है। ऐसे में किशोर अपने दोस्तों से या जिन पर वह भरोसा करता है, उनसे प्रश्नों का समाधान तलाशता है। प्रश्न यह है कि समाधान सुझाने वाला व्यक्ति उसे सही दिशा में ले जा रहा है या नहीं। कई बार तो शंकावश 'कि दुनिया क्या कहेगी' या फिर 'कोई क्या सोचेगा' जैसे प्रश्नों में उलझकर अपनी उत्कंठाओं को दबाने पर विवश हो जाता है। डा. अल्का बताती हैं कि किशोरावस्था में किशोर अमूमन आत्मविश्लेषी, और मूडी हो जाते हैं। कई बार छोटी-छोटी बातों को लेकर परेशान होने लगते हैं। उनके शरीर की बनावट को लेकर चिढ़ाने, अध्यापकों द्वारा डांट, परीक्षा के कारण होने वाला तनाव, अत्यधिक होमवर्क या उसे पूरा नहीं कर पाना जैसी स्थितियों से वह तनावग्रस्त रहता है। इसके अलावा कम उम्र में विपरीत लिंग के प्रति होने वाला आकर्षण भी युवा पीढ़ी के सामने एचआईवी, एड्स, आत्महत्या, नशाखोरी, पढ़ाई में मन नहीं लगने जैसी कई तरह की समस्याएं पैदा करता है। इन सभी परिस्थितियों में बच्चों व किशोरों को अतिरिक्त सहानुभूति व समर्थन की आवश्यकता पड़ती है। अक्सर माता-पिता अपने बच्चों में हो रहे इन परिवर्तनों को प्रत्यक्ष देख तो पाते हैं, लेकिन इन समस्याओं से निबटने के ज्ञान की कमी के कारण बच्चों को डांटते-डपटते रहते हैं और उन पर कई तरह के प्रतिबंध लगा देते हैं, जिसके परिणाम कई बार बहुत घातक होते हैं। इन परिस्थितियों से उबरने में किशोर की काउंसिलिंग बहुत ही सहायक सिद्ध होती है। डा. अल्का बताती हैं कि आजकल सभी स्कूलों में बच्चों व किशोरों के लिए प्रोफेशनल काउंसलर्स नियुक्त किये जा रहे हैं। एक कुशल काउंसलर किशोर के अंदर के भय को दूर करके उसकी बातों को अच्छी तरह समझकर उसकी आशंकाओं और समस्याओं को सुलझाने, किशोरावस्था के दौरान होने वाले शारीरिक परिवर्तनों पर मन को परिपक्वता प्रदान करने, सामाजिक बुराइयों व उनके दुष्परिणामों से अवगत कराने, अच्छे-बुरे का ज्ञान देने, नशाखोरी से बचाने तथा करियर संबंधी जानकारी देने और उनके जीवन के प्रति सकारात्मक सोच पैदा करने जैसे कई महत्वपूर्ण कार्य करता है। डा. अल्का पांडेय के मुताबिक समय-समय पर सही मार्गदर्शन मिलते रहने से बच्चे आने वाली हर समस्या का विवेकपूर्ण समाधान निकाल सकते हैं। माता-पिता व शिक्षकों को किशोरावस्था के दौरान बच्चों में हो रहे हर तरह के परिवर्तन को समझना व उनकी परेशानियों को छोटा न समझकर गम्भीरता से लेना चाहिए। जरूरत पड़ने पर काउन्सलर की मदद भी ली जानी चाहिए।

किशोरों के लिए आवश्यक है काउंसलिंग : डा. अलका

गोपालगंज । उत्तराखण्ड के पंतनगर के जीबी पंत विश्वविद्यालय के डा. अलका पाण्डेय ने कहा कि किशोरावस्था जीवन का बहुत ही महत्वपूर्ण चरण है। इस चरण में बच्चा एक व्यस्क के रूप में परिपक्व होता है। बच्चे से व्यस्क होने की यात्रा किशोरों के लिए बहुत ही चुनौतीपूर्ण यात्रा होती है। उम्र के इस पड़ाव में किशोरो के मन में कई तरह की उथल-पुथल होती रहती है। उन्होने कहा कि जीवन के इस चरण में किशोरो में बहुत से शारीरिक व हार्मोनल परिवर्तन होते है। जिसका सीधा-सीधा असर उनके किशोर मन पर पडता है। प्रश्नो का समुन्द्र मन में उथल-पुथल मचा रहा होता है। किन्तु उचित मार्गदर्शन का आभाव किशोर मन के प्रश्न रूपी उत्कंठा को शांत नही कर पाता। इस अवस्था में किशोर अपने आस-पास के दोस्त या जिन पर वह भरोसा करता है उनसे प्रश्नो के समाधान की उम्मीद करता है। किंतु उसे इस बात का ज्ञान नही होता है कि प्रश्नो के उत्तरया समाधान जिनसे प्राप्त किया है वह सही दिशा मे ले जारहे है या नही। कई बार तो शंका वश कि दुनिया क्या कहेगा या फिर कोइ क्या सोचेगा जैसे प्रश्नो मे उलझ कर अपनी उत्कंठाओं को दबाने पर विवश हो जाता है। इस दौरान किशोर सामान्यतः आत्मविश्लेषी और मूडी हो जाते है। उन्होने कहा कि कम उम्र में विपरित लिंग के प्रति होने वाला आकर्षण भी युवा पीढी के लिए कई तरह की समस्या उत्पन्न करता है। जैसे एच आई वी/एड्स, आत्महत्या, नशाखोरी, पढाई मे मन न लगना इत्यादि। इन सभी परिस्थितियों में बच्चो और किशोरो को अतिरिक्त समर्थन की आवश्यकता होती है। कई माता पिता अपने बच्चो में हो रहे इन परिवर्तनो को प्रत्यक्ष देख तो पाते है पर किशोरावस्था मे होने वाली परेशानियो से कैसे निपटा जाए इसका ज्ञान न होने के कारण बच्चो को डांटते-डपटते व उन पर कई तरह के प्रतिबंध लगा देते है। जिसका परिणाम कई बार बहुत ही घातक होता है। ऐसी परिस्थिति में किशोर काउन्सलिंग कुछ ही सहायक सिद्ध हो सकतो है। काउन्सलर का एक और सबसे अहम कार्य किशोरों में उनके जीवन के प्रति सकारात्मक सोच पैदा करता है। आज कल सभी स्कूल प्रोफेशनल काउन्सलर को नियुक्त कर रहे है। जो किशोरो की समस्याओं को सुलझाने मे उनकी मदद करते है। किशोर अवस्था में काउन्सलर निम्न कारण से आवश्यक है। किशोर मन को परिपक्वता प्रदान करने हेतु, किशोरो के मन में पल रही उत्कन्ठाओं के समाधान हेतु, किशोरो को अच्छे बुरे का ज्ञान कराने हेतु, किशोरावस्था के दौरान उत्पन्न होने वाली समस्याओं के समाधान हेतु, किशोरों में जीवन के प्रति सकारात्मक सोच विकसित करने हेतु, किशोरों को सामाजिक बुराइयों व उनके दुष्परिणामों से अवगत करवाने हेतु, बच्चों को कैरियर संबधी जानकारी देने हेतु, किशोरावस्था के दौरान होने वाले शारिरिक परिवर्तनों से अवगत कराने हेतु, नशाखोरी के बारे में बताने व उससे होने वाले दुष्परिणामों से अवगत कराने हेतु, लिंग संवेदीकरण, लिंग भेद के बारे में जानकारी देने व दोनो लिंगो के प्रति एक समान दृष्टिकोण रखने हेतु, उपर्युक्त सभी कारणो से किशोरावस्था में काउनिसलिंग बहुत ही महतपूर्ण है, बच्चो को समय-समय पर सही मार्गदर्शन मिलते रहने से वे अपने सामने आने वाले हर समस्याओं का सामना डट कर कर सकते है। माता-पिता व शिक्षकों को भी किशोरावस्था में बच्चों के प्रति अपना रवैया बदलने की जरूरत है।

A Training Module on Basic Life Skills



Dr. Alka Pandey
Dr. Rita Singh Raghuvanshi

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Auhtors
Dr. Alka Pandey
Dr. Rita Singh Raghuvanshi

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About the Module

"A Training Module on Basic Life Skills" is developed based on the identified needs of adolescents with a view to broadening the skills necessary to deal with the demands and challenges of everyday life. This module is developed under the Post Doctoral Research Project on "Life Skill Training Programme for Adolescents" funded by UGC. The training module has been carefully organized with 9 parts; each part deals with one important aspect of life skill. An elaborate introduction has been presented to set the stage for understanding the need and necessity of this training module. The nine parts deal with important aspects, each of them have activities to be taken up in the training, instructions for the facilitator, and most important, a fact sheet attached at the end of each part as ready reference. The topics covered are all essential knowledge that adolescents must know to deal with. It is overall a well presented module, useful for a wide range of community efforts in training adolescents this module will act as a guide in the implementation of life skill education in schools, different educational institutions and at home by teachers, educators and parents to adolescents and students of all walks of life.

Dr. Alka Pandey is Post Doctoral Fellow in the Department of Human Development and Family Studies, College of Home Science, GBPUAT, Pantnagar, Dr. Pandey is also recipient of ICAR-JRF, UGC NET and Young Scientist Awards, from the reputed Societies for her work. She has more than 40 publications (research, review, popular articles, book and book chapters) to her credit. She is keenly interested in teaching and research with expertise in the field of Human Development and Family Studies.

Dr. Rita Singh Raghuvanshi is Professor in the Department of Foods and Nutrition, and former Dean of the College of Home Science, GBPUAT, Pantnagar. Dr. Raghuvanshi is recipient of many awards such as Dr. Rajammal P. Devadas Memorial Award, Best Allumni Award of GBPUAT, Chaudhary Devi Lal Outstanding All India Co-ordinated Research Project (AICRP) Award etc. She has written around 30 books (text books, chapter in books and technical bulletins) and authored around 140 Research papers in National and International Journals. She has undertaken 27 research project funded by different institutions and expertise in the field of Food and Nutrition. She has served several national evaluation and monitoring Committees of the of MHRD and Department of Women and Child Development of Government of India and also for policy formulations.

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